

White Mountain Estates Specific Plan and Environmental Impact Report

Part II: Environmental Impact Report

MAY 2007

Prepared By:

Mono County Community Development Department

P.O. Box 347

Mammoth Lakes, CA 93546

(760) 924-1800 fax (760) 924-1801

commdev@mono.ca.gov

WHITE MOUNTAIN ESTATES SPECIFIC PLAN AND ENVIRONMENTAL IMPACT REPORT

LIST OF PREPARERS

MONO COUNTY PLANNING STAFF

Gerry LeFrancois, Project Coordinator
Larry Johnston, Principal Planner
Haven Kiers, Assistant Planner
Greg Newbry, Senior Planner
Scott Burns, Community Development Director

EIR CONSULTANT

Laurie Mitchel, Principal

PROJECT PROPONENT

APPLICANT

White Mountain Estates LLC

TABLE OF CONTENTS

Summary	1
Purpose Statement.....	1
Project Components	1
Location	2
Development and Conservation Issues Addressed in the DEIR	2
Summary of Preparation Process	3
Specific Plan Implementation & Monitoring.....	3
Significant Environmental Effects of the Project.....	3
Significant Irreversible Environmental Effects.....	5
Growth-Inducing Impacts.....	5
Cumulative Impacts.....	5
Alternatives	5
 I. Introduction	 6
Purpose of the EIR.....	6
Relationship of EIR to Specific Plan.....	6
Proponent Information	6
Actions Initiating the EIR	7
Intended Uses of the EIR.....	7
Methodology	8
 II. Project Description.....	 9
Project Location	9
Site Characteristics	9
Surrounding Land Uses.....	9
Project Objectives	11
Project Description	11
Relationship with Local and Regional Plans	12
 III. Environmental Analysis.....	 13
Purpose of the Analysis.....	13
Environmental Setting, Impacts, and Mitigation Measures	13
Land Use.....	13
Population, Housing, & Employment.....	14
Public Services	21
Geology and Soils.....	28
Vegetation and Wildlife.....	38
Visual Resources.....	49
Cultural Resources	54
Circulation.....	56
Noise	65
Air Quality	66
Water Resources	69
Hazards.....	75
 IV. Project Alternatives.....	 78
Introduction	78

A. No Project Alternative	79
B. Reduced Development, 39 Lots.....	79
C. Larger Lot Development, 19 Lots	80
V. Impact Overview	82
Significant Environmental Effects of the Project	82
Significant Unavoidable Environmental Effects	82
Significant Irreversible Environmental Effects.....	82
Growth-Inducing Impacts.....	82
Cumulative Impacts.....	84
VI. Mitigation Monitoring Program	87
VII. References.....	89

TABLES

Table 1	2003 Regional Housing Need--Mono County.....	17
Table 2	Employment by Industry, Mono County	18
Table 3	Climatic Wind Data, Bishop Airport.....	29
Table 4	Annual Average Daily Traffic, Route 6, Mono County	58
Table 5	Annual Average Daily Truck Traffic, Route 6, Mono County	58
Table 6	White Mountain Estates Trip Generation Summary	61

FIGURES

Figure 1	Aerial Photo of the Site.....	Error! Bookmark not defined.
Figure 2	Existing Vegetation Communities On-Site	Error! Bookmark not defined.
Figure 3	Existing Site & Proposed Development Looking South From Highway 6.....	Error! Bookmark not defined.
Figure 4	Existing Site & Proposed Development Looking North From Highway 6	52
Figure 5	White Mountain Estates AM/PM Peak Hour Traffic Volumes....	Error! Bookmark not defined.

SUMMARY - WHITE MOUNTAIN ESTATES SPECIFIC PLAN DRAFT ENVIRONMENTAL IMPACT REPORT

PURPOSE STATEMENT

The overall objective of the proposed project is to increase the amount of single-family housing in the Chalfant Valley in a manner that minimizes impacts to surrounding public lands. Specific project objectives include:

- Increasing residential development opportunities in order to support additional services, such as fire protection, water supply, and schools, and to support an increase in the population.
- Maintaining open space areas and uses on the project site.

The project applicant intends to provide a total of forty-six (46) single-family residential lots; thirty-nine (39) single-family residential lots on the flatter western portion of the site and six (6) single-family residential lots on the steeper eastern portion of the site along with a remainder parcel that allows one single-family residence.

PROJECT COMPONENTS

The White Mountain Estates Specific Plan includes the following components:

1. Subdivision of a total of 70.38 acres (APNs 26-240-09 and 26-240-10) into forty-five (45) single-family residential lots (overall project density of 1.5 acres per dwelling unit), one utility lot (0.78 acres) for water and propane tanks, three lots for open space uses (1.46 acres, 3.81 acres, and 9.08 acres), and a remainder parcel (19.23 acres) that allows one single-family residence. Tract Map Application 37-46 addresses the subdivision of the property.
2. Designation of the project site as Specific Plan (SP). Within the Specific Plan, planned land uses include Single Family Residential with a ½ acre minimum lot size (SFR-½), Open Space (OS), Utility (U), and Specific Plan/Single Family Residential (SP/SFR). An application for a General Plan Amendment (GPA 06-01) addresses the redesignation of the parcels from Rural Mobile Home (RMH) to the Specific Plan land use designations.
3. Development of required infrastructure on-site, including paved two-lane roads, pedestrian paths, a domestic and fire protection water system [well(s), water distribution and storage system, fire hydrants], a propane tank area and underground propane distribution system, a storm drainage system, an underground electrical and telephone system, and individual septic systems for all lots. On-site infrastructure improvements would be developed in two phases by White Mountain Estates LLC.

4. White Mountain Estates LLC is proposing to install either factory-built housing or traditional stick-built housing. Any factory-built housing on-site will be installed on an engineered load-bearing foundation system. Housing materials and colors are intended to blend aesthetically into the surrounding environment. The residential lots would be developed by White Mountain Estates LLC in two consecutive phases.
5. The project, including all associated public infrastructure, would be privately funded.

LOCATION

The project site is located in the southeast part of Mono County, California, in the Chalfant Valley portion of the Tri-Valley. The project site is approximately 10 miles north of Bishop, California, the nearest large incorporated area. It is approximately 45 miles southeast of Mammoth Lakes, by road, the nearest large incorporated area in Mono County. The project site is adjacent to the existing White Mountain Estates subdivision on the east side of Highway 6 at White Mountain Estates Road, approximately 2.4 miles south of the community of Chalfant and approximately 0.8 miles east of Highway 6.

The project site is located in the S ½ of the SE ¼ and SE ¼ of the SW ¼ of Section 22, T 5 S, R 33 E, MDBM. The Mono County Assessor's Parcel Numbers for the project site are 26-240-09 and 26-240-10. The Mono County Land Use Maps showing the parcels are Figure 96, Chalfant Valley Area, and Figure 98, Chalfant Community South.

DEVELOPMENT AND CONSERVATION ISSUES ADDRESSED IN THE DEIR

The DEIR addresses the following development and conservation issues:

Environmental Conditions

1. There are a number of issues relating to water, i.e.:
 - water consumption by the project;
 - impacts on existing wells and the surrounding water table;
 - water pressure/fireflow issues;
 - septic system impacts on water quality; and
 - potential cumulative water quantity and quality impacts in the area.
2. There is a need to avoid disturbance to sensitive plant species on-site and to sensitive plant communities, i.e. the riparian and wetlands areas on-site.
3. There is a need to avoid development in areas impacted by fault hazards.
4. There are concerns about the additional traffic impacts on Highway 6, particularly at the intersection with White Mountain Estates Road.

Infrastructure Constraints

5. Forty-six additional residences and the resulting increase in population could create impacts to public services (transfer station, schools, phone lines, mail) and emergency services (paramedic, fire protection, sheriff) in the area.

Regulatory and Policy Constraints

6. Aesthetic issues related to the rural character of the area, i.e.:

- the project should "allow for the continuation of growth in Chalfant in a manner that promotes and protects its rural and agricultural character" (Mono County Land Use Element, Tri-Valley policies, Objective C, Policy 1); and
- the "look" of the development should remain rural (development layout, building styles and materials).

SUMMARY OF PREPARATION PROCESS

The White Mountain Estates Specific Plan and EIR was prepared by a consultant utilizing review of related technical literature and data, evaluation of the project plan documents, review of local plans and policies including the Mono County General Plan and Land Development Regulations, consultation with interested agencies and individuals, comments received during the scoping process, and incorporation of special studies prepared for the Specific Plan (cultural resources, hydrogeology, botanical, wildlife, traffic/circulation, fault hazards, drainage).

SPECIFIC PLAN IMPLEMENTATION & MONITORING

Policies in the Specific Plan will be implemented through the design and conservation standards established in the Plan. Those standards incorporate suggested mitigation measures from the special studies (traffic, noise, hydrogeology, flooding) prepared for the project as well as mitigation from the County's General Plan and Land Development Regulations. The design and conservation standards also incorporate proposed mitigation measures resulting from the analysis in the Draft Environmental Impact Report for the Specific Plan. Implementation of portions of the Specific Plan will also be achieved through the tract map process and conditions of approval for the tract map. Implementation and monitoring of the Specific Plan are outlined in detail in Chapter VII of the Specific Plan, Specific Plan Enforcement.

SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

The DEIR identifies seven potentially significant environmental effects of the project that, with mitigation, can be reduced to less than significant levels.

1. Public Service Impacts (fire and emergency medical services);
2. Geology/Soils Impacts (erosion);
3. Vegetation and Wildlife Impacts (sensitive plant species and habitats);
4. Circulation Impacts (turn volume increases and safety concerns);
5. Air Quality Impacts (dust and erosion);
6. Visual Resources; and
7. Hazards—seismic, flood, fire.

All other impact areas are not potentially significant; mitigation measures are proposed in the DEIR for several of these impact areas to reduce impacts to even lower levels.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The project would result in the conversion of 55.65 acres of desert scrub to a developed condition, assuming that a house is built on the remainder parcel. If a house is not built on the remainder parcel, the project would result in the conversion of 36.42 acres to a developed condition. While the Specific Plan allows only 40 percent maximum site disturbance on the residential parcels, development of housing, roads, utilities, fencing, and landscaping would fragment the existing habitat and vegetation and would essentially convert all of the area designated for residential uses from its current condition to a developed condition. The project would utilize on-site septic systems and a community water system with wells. Once the site is developed with residential uses it is unlikely that those uses would change.

GROWTH-INDUCING IMPACTS

Chalfant is primarily a residential community with extremely limited commercial and agricultural facilities and no industrial or manufacturing sites. As data from the 2000 Census indicate, most workers in Chalfant commute to jobs outside Chalfant, primarily in Bishop and Mammoth Lakes. Although the project is anticipated to create a demand for some services, both during the construction phases of the project and over the life of the project, the demand is anticipated to be small and it is anticipated that most needs will be filled by current residents or businesses in the area.

CUMULATIVE IMPACTS

The EIR identifies three environmental effects that may be cumulatively considerable as the result of planned projects in the Chalfant area, including the proposed project:

1. Public services (emergency medical, law enforcement, schools, fire);
2. Geology/Soils (erosion); and
3. Visual resource impacts.

ALTERNATIVES

The project analyzes three alternatives to the proposed project:

1. No Project Alternative. The project site would remain in its current condition.
2. Reduced Development: 39 residences on lots ranging from 0.50 to 0.96 acres.
3. Large Lot Development: 19 residences on lots ranging from 1.0 to 1.86 acres.

The alternatives reduce the identified impacts to varying degrees but in some cases create additional impacts.

I. INTRODUCTION

PURPOSE OF THE EIR

CEQA requires lead agencies to prepare an Environmental Impact Report (EIR) in cases where a project may have a significant effect on the environment. As defined by CEQA (Guidelines Section 15121), an EIR is an informational document intended to:

- Inform public agency decision-makers and the public generally of the significant environmental effects of a project;
- Identify possible ways to minimize the significant effects; and
- Describe reasonable alternatives to the project.

The CEQA Guidelines require that EIRs contain specific elements (Guidelines Sections 15122-15132), i.e.:

- Table of Contents;
- Summary;
- Project Description;
- Environmental Setting;
- Consideration and Discussion of Environmental Impacts;
- Effects Not Found to be Significant;
- Consideration and Discussion of Significant Environmental Impacts;
- Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects;
- Consideration and Discussion of Alternatives to the Proposed Project;
- Discussion of Cumulative Impacts; and
- Organizations and Persons Consulted.

RELATONSHIP OF THE EIR TO THE SPECIFIC PLAN

The White Mountain Estates Environmental Impact Report (EIR) evaluates the potential impacts of the project on the environment. The associated Specific Plan contains development standards and implementation measures for the proposed project. Many of these serve as mitigation measures for potential environmental effects identified in the environmental analysis of the EIR. Some mitigation measures specified for the project can only be implemented or required by other agencies. The Specific Plan may also contain standards or requirements that go beyond environmental mitigation, such as construction standards, architectural standards, or other special features of development.

PROPONENT INFORMATION

The project proponent is White Mountain Estates LLC, 332 West Howell Avenue, Ridgecrest, California, 93555.

ACTIONS INITIATING THE EIR

The primary action initiating the preparation of the White Mountain Estates Specific Plan and Environmental Impact Report is the proponent's application to subdivide two adjacent parcels in Chalfant (APN 26-240-10 and APN 26-240-09) into single-family residential lots. The project application includes the following elements required to implement the proposed project:

1. General Plan Amendment 06-01. A General Plan Amendment is required to change the existing land use designation on the parcel from Rural Mobile Home (RMH) to Specific Plan (SP) including Single Family Residential (SFR), Open Space (OS), and Utility (U).
2. Tentative Tract Map # 37-46 subdivides a total of 70.38 acres into forty-five (45) single-family residential lots, one utility lot to be used for water and propane tanks, three lots for open space uses, and a remainder parcel that allows one single-family residence.

The "project" analyzed in the EIR is the development of the parcel with roads, utilities, single-family residences, and landscaping. The full project description is presented in the White Mountain Estates Specific Plan.

INTENDED USES OF THE EIR

Public Agencies Expected to Use the EIR

Mono County, as the lead agency for the project, is responsible for processing and considering approval of the White Mountain Estates Specific Plan, the General Plan Amendment, and the Tentative Tract Map. The County is also responsible for certifying the adequacy of the EIR. Other agencies that may be required to act on the project or issue permits include:

1. Great Basin Unified Air Pollution Control District (GBUAPCD);
2. Lahontan Regional Water Quality Control Board (LRWQCB);
3. California Department of Transportation (Caltrans);
4. Chalfant Valley Fire Protection District;
5. Mono County Department of Public Works;
6. Mono County Environmental Health; and
7. Mono County Building Division.

Permits and Approvals Required to Implement the Project

The following additional permits and approvals may be required to implement the project:

Lahontan Regional Water Quality Control Board: NPDES permit [required for projects disturbing more than one (1) acre.]

Chalfant Valley Fire Protection District: Approval of fire suppression system/design.

Mono County Department of Public Works: Grading permit and approval of storm drainage system. Encroachment permit for road access.

Mono County Environmental Health: Well permit and approval of water storage and distribution system. Approval of individual septic systems for each of the proposed residences.

Mono County Building Division: Building permits for residences.

METHODOLOGY

The environmental analysis in this document is based on comments from scoping meetings, comments received in response to the Notice of Preparation, review of related technical literature and data, evaluation of the project plan documents, review of relevant local plans including the Mono County General Plan and Master Environmental Assessment, consultation with interested agencies and individuals, and review of special technical studies prepared for the project.

The Appendices contain copies of the Notice of Preparation, comments from scoping meetings, copies of the technical studies prepared for the project, and a complete Map Set for the project.

II. PROJECT DESCRIPTION

PROJECT LOCATION

The project site includes two parcels with a total area of 70.38 acres located in the southeast part of Mono County, California, in the Chalfant Valley portion of the Tri-Valley (see Figure 1, Regional Map and Vicinity Map, in Appendix A, Map Set). The site is approximately 10 miles north of Bishop, California, the nearest large incorporated area and approximately 45 miles southeast of Mammoth Lakes, the nearest large incorporated area in Mono County. The project site is adjacent to the existing White Mountain Estates subdivision on the east side of Highway 6 at White Mountain Estates Road.

The project site is located in the S ½ of the SE ¼ and SE ¼ of the SW ¼ of Section 22, T 5 S, R 33 E, MDBM. The Mono County Assessor's Parcel Numbers for the project site are 26-240-09 and 26-240-10. The Mono County Land Use Maps showing the parcels are Figure 96, Chalfant Valley Area, and Figure 98, Chalfant Community South.

SITE CHARACTERISTICS

The project site is located on the alluvial fans and lower foothills of the White Mountains. The western portion of the project site (APN 26-240-10), located adjacent to the existing White Mountains Estates subdivision, slopes gently upwards from west to east and is relatively flat and open. The topography on the eastern portion of the parcel (APN 26-240-09) is steeper with hills, gullies and drainages, an actively eroding fault scarp, a spring, and a seep (see Figure 9, Section A, and Figure 12, Tract Map, Topography, in Appendix A, Map Set).

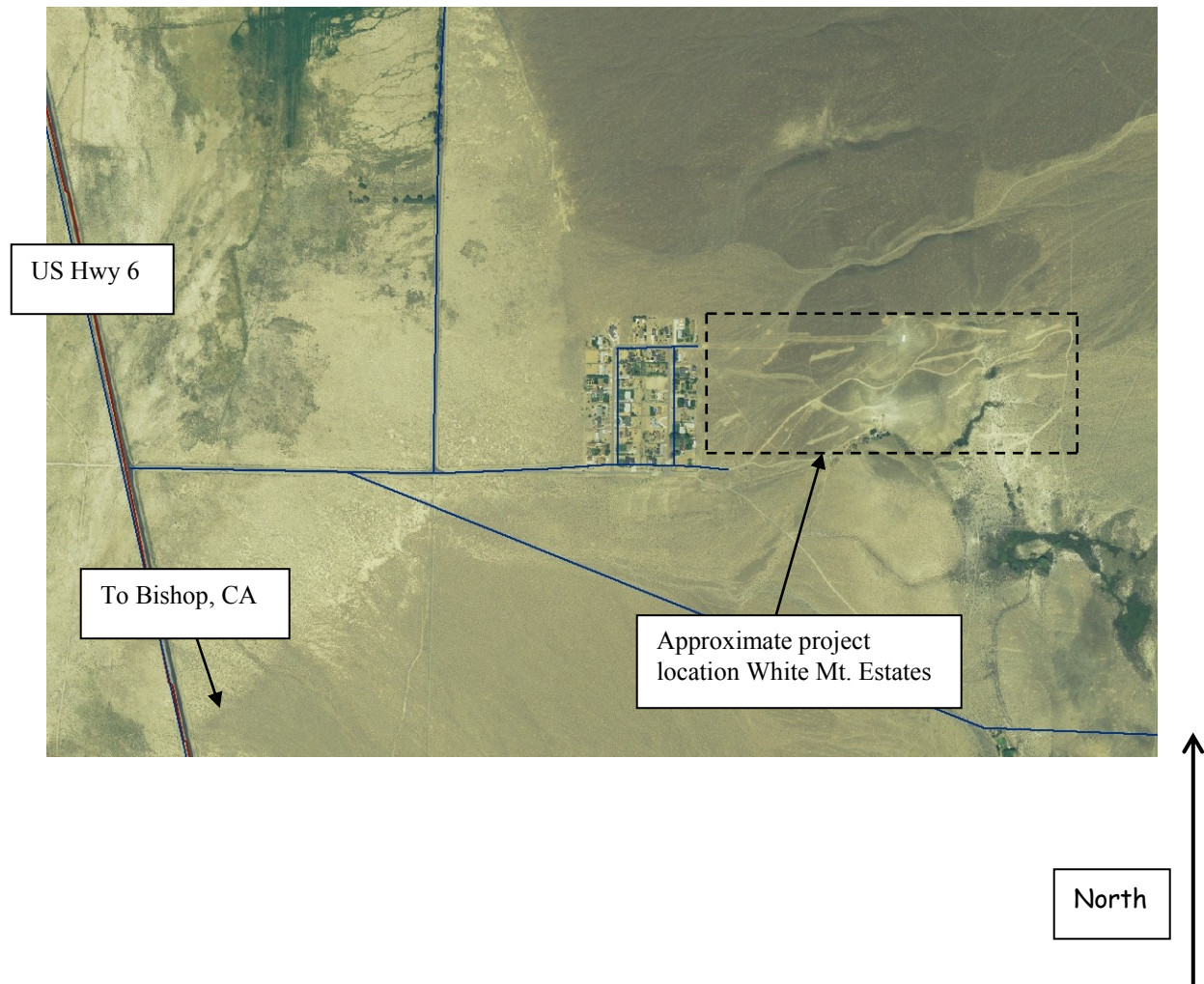
Access to the site is from White Mountain Estates Road, which intersects Highway 6 approximately 0.8 miles west of the project site. Vegetation on-site is desert-adapted shrubs, regularly spaced, low-growing and uniform in appearance. Areas of dense scrubby riparian vegetation dominated by willows are associated with the spring and seep on-site. Figure 1 provides an aerial view of the site.

SURROUNDING LAND USES

Residential property in the Chalfant Valley is a mix of half-acre lots, one-acre lots and larger lots designated Rural Mobile Home (RMH) or Estate Residential (ER). Both designations allow Mobile Homes to be used as single-family residences, small-scale agriculture for personal use, and animals and pets as allowed by the Mono County Animal Standards (Section 04.270 of the Land Development Regulations). Existing development in White Mountain Estates is half-acre lots designated Rural Mobile Home (RMH).

Land use outside of community areas in the Chalfant Valley is primarily open space and agriculture. Land on both sides of Highway 6 is owned by the Los Angeles Department of Water and Power (LADWP). That land is designated Open Space (OS) and is maintained as

FIGURE 1
AERIAL PHOTO OF THE SITE



open space by LADWP to protect its water resources. Farther east and west of the community areas, the land is public land managed by the Bureau of Land Management (BLM). Those lands are primarily managed for habitat conservation and dispersed recreation.

Land surrounding the project site includes LADWP lands designated Open Space (OS) to the south, public lands managed by the Bureau of Land Management (BLM) to the south, north, and east, and the existing forty-four (44) lot White Mountain Estates subdivision to the west. The lot immediately south of the eastern portion of the project site is the common lot for the existing White Mountain Estates subdivision. The existing subdivision is designated Rural Mobile Home (RMH); the public lands managed by the BLM are designated Resource Management (RM) and Specific Plan (SP). The SP designation indicates land identified for a potential land exchange.

PROJECT OBJECTIVES

The overall objective of the proposed project is to increase the amount of single-family housing in the Chalfant Valley in a manner that minimizes impacts to surrounding public lands. Specific project objectives include:

- Increasing residential development opportunities in order to support additional services, such as fire protection, water supply, and schools, and to support an increase in the population.
- Maintaining open space areas and uses on the project site.

The project applicant intends to provide a total of forty-six (46) single-family residential lots; thirty-nine (39) single-family residential lots on the flatter western portion of the site and six (6) single-family residential lots on the steeper eastern portion of the site along with a remainder parcel that allows one single-family residence.

PROJECT DESCRIPTION

The White Mountain Estates Specific Plan includes the following components:

1. Subdivision of a total of 70.38 acres (APNs 26-240-09 and 26-240-10) into forty-five (45) single-family residential lots (overall project density of 1.5 acres per dwelling unit), one utility lot (0.78 acres) for water and propane tanks, three lots for open space uses (1.46 acres, 3.81 acres, and 9.08 acres), and a remainder parcel (19.23 acres) that allows one single-family residence. Tract Map Application 37-46 addresses the subdivision of the property.
2. Designation of the project site as Specific Plan (SP). Within the Specific Plan, planned land uses include Single Family Residential with a ½ acre minimum lot size (SFR-½), Open Space (OS), Utility (U), and Specific Plan/Single Family Residential (SP/SFR). An application for a General Plan Amendment (GPA 06-01) addresses the redesignation of the parcels from Rural Mobile Home (RMH) to the Specific Plan land use designations.
3. Development of required infrastructure on-site, including paved two-lane roads, pedestrian paths, a domestic and fire protection water system (wells, water distribution and storage system, fire hydrants), a propane tank area and underground propane distribution system, a

storm drainage system, an underground electrical and telephone system, and individual septic systems for all lots. On-site infrastructure improvements would be developed in two phases by White Mountain Estates LLC.

4. White Mountain Estates LLC is proposing to install either factory-built housing or traditional stick-built housing. Any factory-built housing on-site will be installed on an engineered load-bearing foundation system. Housing materials and colors are intended to blend aesthetically into the surrounding environment. The residential lots would be developed by White Mountain Estates LLC in two consecutive phases.
5. The project, including all associated public infrastructure, would be privately funded.

RELATIONSHIP WITH LOCAL AND REGIONAL PLANS

The proposed project is being analyzed in relation to local and regional plans, including the following:

- Water Quality Control Plan for the Lahontan Region (Basin Plan);
- Great Basin Unified Air Pollution Control District regulations;
- Chalfant Valley Fire Protection District Sphere of Influence Report;
- Mono County Regional Transportation Plan (RTP);
- Caltrans District 9 planning documents--Route Concept Reports, Route Development Plans, and District System Management Plans; and
- Mono County General Plan.

III. ENVIRONMENTAL ANALYSIS

PURPOSE OF THE ANALYSIS

The purpose of the environmental analysis is to determine if there are any potentially significant impacts on the environment resulting from the implementation of the project. The analysis includes proposed mitigation measures that can reduce or eliminate any such impacts. The analysis discusses alternatives to the proposed project, reviews potential growth inducing impacts and cumulative impacts, and identifies significant unavoidable adverse environmental impacts.

Mitigation measures incorporated into the DEIR serve as development standards, design standards, and conservation standards for the proposed White Mountain Estates Specific Plan.

ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

LAND USE

LAND USE SETTING

Chalfant is one of three residential communities located in the Tri-Valley, a north-south trending valley, relatively flat in the middle, bounded to the east by the White Mountains and to the west by the southeast sloping lava flows of the Volcanic Tablelands and the Benton Range. Outside of community areas, most of the land in the Tri-Valley is public land managed by the Bureau of Land Management (BLM). In the southern portion of the Tri-Valley, including the Chalfant area, the Los Angeles Department of Water and Power (LADWP) owns large parcels of land.

Land use in the area surrounding Chalfant is primarily open space and agriculture. Community areas on both sides of Highway 6 are surrounded by land owned by the Los Angeles Department of Water and Power (LADWP). That land is designated Open Space (OS) and is maintained as open space by LADWP to protect its water resources. Farther east and west of the community areas, the land is public land managed by the Bureau of Land Management (BLM). Those lands are primarily managed for habitat conservation and dispersed recreation. In addition to residential development, the community of Chalfant has a small store and community facilities including a community center, a park, a solid waste transfer station, and a fire station.

Land surrounding the project site includes LADWP lands designated Open Space (OS) to the south, public lands managed by the Bureau of Land Management (BLM) to the south, north, and east, and the existing forty-four (44) lot White Mountain Estates subdivision to the west. The lot immediately south of the eastern portion of the project site is the common lot for the existing White Mountain Estates subdivision. That lot is designated Rural Mobile Home (RMH) and is utilized for storage by residents of the existing subdivision. The existing subdivision is designated Rural Mobile Home (RMH) with one-half acre lots and is developed with single-family residences and mature landscaping. The public lands managed by the BLM are designated Resource Management (RM) and Specific Plan (SP). The SP designation indicates land identified for a potential land exchange.

The project site is currently designated Rural Mobile Home (RMH) in the Mono County General Plan Land Use Element. The RMH designation provides for:

“...development in rural areas within the County consistent with developed lifestyles when mixed uses are determined to be acceptable to the citizens of the RMH area. The RMH district is further intended to provide for mixed uses including single-family residences, mobile homes used as residences, and small-scale agricultural uses including the keeping of fowl and animals for personal use” (Mono County Land Use Element, Rural Mobile Home Designation).

The minimum lot size for parcels designated Rural Mobile Home is one acre. The proposed Specific Plan land use designation for the White Mountain Estates subdivision is Single-Family Residential (SFR) with a one-half acre minimum lot size. Tri-Valley Area Plan policies currently require gross densities for residential development in Chalfant not to exceed one dwelling unit per acre. The 46 units proposed for the 70.38 acre site would result in a gross density of 1.53 acres per dwelling unit. The housing has been clustered on the western portion of the project site, adjacent to the existing 44-unit subdivision, leaving 14.35 acres (20 percent of the project area) as open space along with a remainder parcel of 19.23 acres on which one single-family residence is allowed. If the remainder parcel is not developed, 33.58 acres (47 percent of the project area) will remain as open space.

LAND USE IMPACTS

The proposed project would provide 46 single-family residences to meet local needs adjacent to existing development and existing roads and highways in Chalfant. The project is currently designated for residential development. The location of additional residential development on a parcel adjacent to existing development in Chalfant is consistent with Tri-Valley Area Plan policies that encourage residential development in areas where the proposed development would minimize impacts to surrounding public lands. The proposed development is also consistent with Tri-Valley Area Plan policies that address gross densities for residential development in the area.

CONCLUSION

The project is not anticipated to impact land use in Chalfant. No mitigation is proposed.

POPULATION, HOUSING, & EMPLOYMENT

POPULATION CHARACTERISTICS

Data on population characteristics in the Tri-Valley and Chalfant are from the 2000 US Census and demographic data in the Mono County 2003 Housing Element.

The population in the Tri-Valley is similar to the overall population in the unincorporated areas of the County. The overall population is aging, from a median age of 33 in 1990 to 40 in 2000. During that time period, the percentage of the overall population under age 5 decreased slightly while the percentage of the overall population aged 65 or older increased slightly. In 2000, approximately 20 percent of the Tri-Valley population was school-aged children and approximately 13 percent was senior citizens 65 and older. Both of these figures are higher than in other community areas in the unincorporated area.

The Hispanic population increased slightly between 1990 and 2000 and remains fairly evenly dispersed throughout the unincorporated area. Since 1980, the Tri-Valley area has continued to be home to approximately 16-17 percent of the overall population in the unincorporated area.

Population characteristics for the Tri-Valley are described in the following paragraphs. Data for Chalfant alone are often unavailable; they are included in overall figures for the Tri-Valley.

- In 2000, the total population of the Tri-Valley was 954 persons, approximately 17 percent of the County's total population of 5,759 persons. Since 1980, the percentage of the unincorporated area population living in the Tri-Valley has remained fairly constant at 16-17 percent.
- Chalfant had a population of approximately 465 persons in 2000, approximately 49 percent of the total population in the Tri-Valley.
- The median age in the unincorporated area increased from 33 in 1990 to 40.1 in 2000. In the Tri-Valley, the median age was 42.9 in 2000.
- In 2000, the Tri-Valley had a slightly smaller percentage of children under five than the overall percentage in the unincorporated area (5 percent in the Tri-Valley, 6 percent in the unincorporated area). The overall population of children under five in the unincorporated area decreased from 8 percent to 6 percent of the total population between 1990 and 2000. The population of children under five is fairly evenly distributed throughout the unincorporated area.
- In 2000, the population of children aged 5-17 in the Tri-Valley was 20 percent of its total population compared to 18 percent of the total population in the unincorporated area. The overall population of school-age children in the unincorporated area increased numerically between 1990 and 2000 but decreased from 19 percent to 18 percent of the total population. Compared to other community areas, the Tri-Valley had the highest percentage of its population in this age group; although other community areas had a greater number of people this age, it was not such a high percentage of their overall population since their overall population was also higher.
- In 2000, adults aged 18-64 comprised 61 percent of the Tri-Valley's population compared to 65 percent of the unincorporated area's population. That segment of the unincorporated population remained fairly constant between 1990 and 2000, increasing from 63 percent of the total population in 1990 to 65 percent of the total population in 2000. The population of adults 18-64 was fairly evenly distributed throughout the unincorporated area.
- In 2000, senior citizens aged 65 or older made up 13 percent of the Tri-Valley's population compared to 12 percent of the unincorporated area's population. That segment of the unincorporated area population increased from 10 percent to 12 percent of the total population between 1990 and 2000. Compared to other community areas, the Tri-Valley had one of the higher percentages of its population in this age group and the third largest number of people in this age group.
- Between 1990 and 2000, the percentage of the population identifying themselves as Hispanic, of whatever race, remained relatively unchanged in the unincorporated area, rising from 11.3 percent of the population in 1990 to 12.4 percent of the population in 2000. This population is fairly evenly distributed throughout the county's communities; 11.22 percent of the Tri-Valley population identified itself as Hispanic in 2000. Anecdotal data indicates that the Hispanic population is employed throughout the county in service jobs and has continued to increase since the 2000 census.

HOUSING CHARACTERISTICS

Data on housing characteristics in Chalfant are available from two sources, the 2000 US Census and The Eastern Sierra Housing Needs Assessment prepared in 2004. The Housing Needs Assessment

utilized information from the US Census and other public information sources, employee, household and employer surveys, realtors, lenders, property managers and employer interviews.

Housing in the Tri-Valley is single-family housing, a mix of traditional houses and Mobile Homes. Much of it is relatively new, with close to half of the housing built in the last 20 years. The Tri-Valley has a higher number of homeowners than other communities in the county but also more overcrowded households and more large households. The Mono County Housing Element, utilizing data from the 2000 Census, provides the following findings about housing in the Tri-Valley area:

- The Tri-Valley had 510 housing units in 2000, 279 detached single-family residences and 231 Mobile Homes, a somewhat higher percentage of Mobile Homes than in other county communities.
- The Tri-Valley has a higher percentage of homeowners (77 percent) versus renters (23 percent) than elsewhere in the county. Homeowners tend to be older, with many seniors.
- In 2003, the Mono County Community Development Department Housing Conditions Survey identified 167 housing units in the Tri-Valley as being in good condition, 116 units as being in fair condition, 51 units as being in poor condition, and 8 units as being vacant.
- 157 units (31 %) in the Tri-Valley were built 10 or fewer years ago, 89 units (17 %) were built 11-20 years ago, 107 units (21 %) were built 21 -30 years ago, 103 units (20%) were built 31-40 years ago, 28 units (5 %) were built 41-50 years ago, and 26 units (5 %) were built 51 or more years ago (Mono County Housing Element, Table 37);
- The Tri-Valley had 50 overcrowded households in 2000 (more than one person per room), more than any other planning area in the county and 40 percent of the total 125 overcrowded households in the county.
- The Tri-Valley had 56 large households in 2000 (five or more persons), 30 owner occupied units and 26 renter occupied units. Only Antelope Valley had a higher number of large households and the majority of those were renters at the Marine Corps Housing in Coleville.
- The Tri-Valley had 38 households overpaying for housing in 2000 (paying 30 percent or more of household income for housing), 25 owner occupied households and 13 renter occupied households. This is one of the lowest percentages of households overpaying in the county's communities (according to data from the 2000 Census).

The Eastern Sierra Housing Needs Assessment provides the following findings based on a combination of 2000 Census data and results from the household survey:

- This area has a relatively small percentage of units devoted to seasonal/recreational use (15%), but the number more than doubled since the 1990 Census which indicates more seasonal use will continue into the future.
- There was a modest increase in the number of units since 1990 (17.9%), however the total number of vacant units increased by over half and occupied units only increased by 8%. There was a substantial increase in owner-occupied units (from 67% to 79%), but there were fewer new households moving into this area in the 15 months prior to the 2000 Census than other areas.
- Of its housing stock, 231 units are mobile homes and 279 are single-family units. There are no multi-family units and almost all the homes are heated by LP gas or wood. This is consistent with a rural area.
- Home values increased 39% and rents more than doubled from 1990 to 2000. Household income increased 71% during this period, indicating that for owners, income was increasing faster than housing values. The increase in home values reflects the large number of mobile

- homes in the area and median household income of \$40,278 is well below the state (\$47,493) and the County (\$44,992).
- There are a lot of seniors in the area (23% of households) and they make up 26% of the owners. Families with children under 18 make up one-third of the households, which is higher than Mono County. Households predominately consist of one and two persons (84%) and there are a fair number of single parents (10% of households).
 - Paying too much for housing was a problem for 20% of households in the area. It appears that those earning less than 60% of the Area Mean Income (AMI) have the greatest difficulty with housing costs, yet there was only modest interest in rent assistance and little support for purchasing a deed restricted unit.
 - Among owners, 44% want to buy a different home and 83% of renters would like to be owners. They are looking for midsize single-family homes or manufactured/mobile homes, although there was a fair amount of interest in smaller single-family units. Overall, they are looking for slightly larger homes than most of Mono County.
 - When looking for a place, cost and size of the lot are very important, as is storage for equipment/vehicles. Proximity to employment is not as important to residents here than other places.
 - Employees in the Tri-Valley area were more inclined to see housing as a serious problem (55%) than a critical problem (29%).

HOUSING NEED

The Mono County Housing Element 2004 Update identifies the Regional Housing Needs for the unincorporated area of the county and for Tri-Valley:

Table 1 2004 Regional Housing Need--Mono County

<u>Income Group</u>	<u>Unincorporated Area Need</u>	<u>Tri-Valley Need</u>
Very Low	49	8
Low	48	8
Moderate	39	7
Above Moderate	<u>97</u>	<u>16</u>
Total	233	39

Notes: Tri-Valley need is based on the proportion of the total unincorporated area population living in the Tri-Valley in 2000.

Source: Mono County Housing Element 2004 Update.

Very low income households are those with 50 percent or less of the area's median income; low income households are those with 50 to 80 percent of the median income; moderate income households are those with 80 to 100 percent of the median income; and above moderate income households are those with 100 to 120 percent or more of the median income. The median income for the unincorporated area of Mono County was \$ 54,500 in 2003 (Mono County Housing Element 2004 Update). Housing in the proposed project is anticipated to sell at \$325,000--\$350,000. The proposed houses would be affordable to households with above moderate incomes and would fulfill the regional housing need for above moderate income housing in the Tri-Valley.

EMPLOYMENT AND INCOME CHARACTERISTICS

Data on employment and income characteristics in Chalfant are available from two sources, the 2000 US Census and The Eastern Sierra Housing Needs Assessment prepared in 2004. The Housing Needs Assessment utilized information from the US Census and other public information

sources, employee, household and employer surveys, realtors, lenders, property managers and employer interviews.

Employees in the Tri-Valley area tend to work outside the area, and a greater percentage of the population is self-employed and/or telecommutes a portion of their workweek than in other areas of the unincorporated area. Over half of all workers travel to Bishop year-round and approximately one quarter of all workers travel to Mammoth Lakes year-round. The median household income in the Tri-Valley is in the middle for all communities in the unincorporated area. The Tri-Valley area has more retired people and more people receiving Social Security Income and Supplemental Security Income than other areas of the unincorporated area.

Employment in Mono County is heavily dependent on retail trade, services, and government (see Table 2). In the unincorporated areas of Mono County, services, construction and mining, and retail trade predominate, with agriculture, manufacturing, and transportation and public utilities employing a greater percentage of the population than in the entire county.

In 2000, of the 387 total workers in the Tri-Valley, 274 (71 percent) worked outside of Mono County, probably in Inyo County, and 2 worked outside of California (Mono County Housing Element, Table 28). No other planning area in Mono County has such a high percentage of residents working outside of the county. Mono Basin had 53 people (20 percent of all workers in that areas) who worked outside the county while Long Valley/Wheeler Crest had 128 people (17 percent of all workers) who did so (Mono County Housing Element, Table 28).

Data from the 2000 US Census indicate that over half of all workers in the Tri-Valley had a travel time to work of less than 30 minutes, indicating many in Chalfant probably worked in Bishop. Seven percent worked at home, 18 % commuted 30-44 minutes one-way, 4 % commuted 45-59 minutes, and 16 % commuted over 60 minutes one-way (Mono County Housing Element, Table 29). Data from the Eastern Sierra Housing Needs Assessment indicate that:

Residents commute throughout the area. Roughly 51% go to Bishop in both the summer and winter season and 27% go to Mammoth Lakes. Benton is a destination for 10-12% of employees, followed by Other and Independence. (Eastern Sierra Housing Needs Assessment, Tri-Valley Profile)

Table 2 Employment by Industry, Mono County

	<u>Total Mono County</u>	<u>Unincorporated Area</u>
Agriculture	0.2 %	4.0 %
Construction and Mining	6.2 %	17.4 %
Manufacturing	1.1 %	3.4 %
Wholesale Trade	0.3 %	0.0 %
Retail Trade	25.7 %	10.5 %
Finance, Insurance, Real Estate	7.9 %	2.9 %
Transportation, Public Utilities	1.8 %	3.7 %
Services	35.7 %	47.1 %
Government	21.3 %	8.7 %

Sources: County Snapshot: Mono 2002; US Census 2000, Summary File 3, Table P49.

The median household income in the Tri-Valley in 1999 was \$ 40,278, but varied by the age of the householder (Mono County Housing Element, Table 30):

25-34 years old	\$ 26,667 median household income
35-44 years old	\$ 53,750
45-54 years old	\$ 49,107
55-64 years old	\$ 50,139
65-74 years old	\$ 29,239
75 years or older	\$ 30,000

Tri-Valley's median household income was in the middle range for all communities in the unincorporated area. Antelope Valley and Bridgeport had lower median incomes while Mono Basin, June Lake, and Long Valley/Wheeler Crest had higher median incomes.

The 2000 US Census indicated that in 1999 households in the Tri-Valley had income from a variety of sources:

Wage Income	273 households (73 percent of all households)
Self-Employment Income	54 households (14 percent of all households)
Interest/Dividend Income	129 households (34 percent of all households)
Social Security Income	131 (35 percent of all households)
Supplemental Security Income	28 (7 percent of all households)
Public Assistance Income	6 (2 percent of all households)
Retirement Income	111 (30 percent of all households)

(Mono County Housing Element, Table 31).

The Tri-Valley area had the highest number and percentage of households with retirement income and along with the Antelope Valley the highest number and percentage of households with Social Security income and Supplemental Security income. The Eastern Sierra Housing Needs Assessment corroborated this data, noting that "the percentage of retired households [in the Tri-Valley area] is more than double Mono County, at 5% vs. 2%" (Eastern Sierra Housing Needs Assessment, Tri-Valley Profile).

The Eastern Sierra Housing Needs Assessment Tri-Valley Profile also notes that:

Self-employment is higher here (13%) than Mono County (10%). There is also a possible corollary to telecommuting, as 27% of employee households have an average of 1.56 telecommuters. This is higher than Mono County; however, they average fewer telecommuting days (2.59 versus 3.34 for the county

POPULATION GROWTH IMPACTS

POPULATION IMPACTS. The estimated population growth resulting from the project is 117 persons (46 single-family residential units x 2.54 average household population in the Tri-Valley), a 25 percent increase over Chalfant's population of 465 persons in 2000 and a 12 percent increase over the Tri-Valley population of 954 persons in 2000. If the new population follows the age trends found in the Tri-Valley in 2000, 6 people will be younger than 5, 24 will be 5-17 years old, 72 will be 18-64 years old, and 15 will be 65 years or older.

The growth in population could affect schools, public services (fire, police, emergency medical services), and county services such as libraries, parks and recreational facilities, and administrative services. Potential impacts of the growth in population are discussed in applicable sections of the DEIR (e.g. circulation, public services, noise, etc.).

HOUSING IMPACTS. The Specific Plan allows for the development of 46 single-family residences anticipated to sell in the \$325,000-\$350,000 price range. The proposed houses would be affordable to households with above moderate incomes and would fulfill the regional housing need for above moderate income housing in the Tri-Valley.

Specific Plan policies also require White Mountain Estates LLC to provide two (2) affordable housing units, which will be deed restricted so they remain affordable. The affordable housing units will fulfill Mono County's requirement that development projects provide affordable housing:

Mono County Housing Element

Policy 5 Require new development projects to provide their fair share of affordable housing units – an amount sufficient to accommodate the affordable housing demand created by the development project. Refine and continue use of inclusionary housing requirements to reflect a fair share contribution of units, in-lieu fees, land, etc.. Coordinate regional housing mitigation and fee impact programs with those of the Town of Mammoth Lakes..

Housing demand in Mono County has increased since 2000, including the need for affordable housing. In the Tri-Valley area, particularly in Chalfant, it is unknown how much of that demand comes from residents of Mono County and how much of the demand comes from residents of Inyo County. By providing additional affordable housing, the project will meet an identified housing need. Mono County adopted an Affordable Housing Ordinance in 2006. Since the application for White Mountain Estates was submitted prior to the adoption of the ordinance the project is not being required to comply with the ordinance. However, the provisions of the ordinance were utilized to calculate the affordable housing requirements for the project.

EMPLOYMENT IMPACTS. Chalfant is primarily a residential community with extremely limited commercial and agricultural facilities and no industrial or manufacturing sites. There is very little privately owned land in the area and an extremely limited portion of that land is designated for commercial or light industrial uses. The Tri-Valley Area Plan policies in the Mono County General Plan Land Use Element support the development of "small-scale commercial uses that serve the communities" in Chalfant.

Tri-Valley Area Plan Policies, Mono County General Plan Land Use Element

OBJECTIVE D

Provide adequate commercial and public facilities and improved access to county services to serve visitors and residents in the Tri-Valley.

- Policy 1: Designate adequate lands compatible with the rural character of the Tri-Valley along Highways 6 and 120 in Benton and Chalfant for small-scale commercial uses that serve the communities.
- Policy 3: Prevent the establishment of regional commercial facilities.
- Policy 5: Allow the continuation of home businesses in the area.

As data from the 2000 Census indicate, most workers in Chalfant commute to jobs outside Chalfant, primarily in Bishop and Mammoth Lakes. It is anticipated that this commuting trend will continue.

Anecdotal data from recently developed single-family residential subdivisions elsewhere in Chalfant has shown new homebuyers in the area to be working people who are currently residents of the Eastern Sierra.

As a result of the lack of employment in the Chalfant area and the demand for mid-range housing for working people in Mono and Inyo counties, it is anticipated that the housing in the proposed development will be occupied by local residents as their primary residence and will not be used as second homes or seasonal use residences. It is also anticipated that the housing will be occupied by working people who are currently residents of the Eastern Sierra.

The proposed development will create jobs during the initial construction phases of the development. It is anticipated that short-term construction-related jobs will be absorbed by existing employees from Mono County and Bishop and that the construction phases of the development will not increase the local population by increasing long-term employment opportunities. Similarly, the development will not create additional demand for housing as a result of increasing long-term employment opportunities since construction jobs will be taken by existing residents of the area.

Residential development may also create a limited demand for support services for the development such as home repairs, landscape services, cleaning services, etc.. Residents of the development will also create a demand for goods and services such as household goods, clothing, recreation, transportation needs, utility needs, etc.. It is likely that most of the demand for goods and services will be met by existing businesses and employees, primarily in Bishop, and that the project will not create the need for additional employees or housing for those employees.

CONCLUSION

The project will not result in significant impacts to population, housing, or employment; mitigation measures are not required.

PUBLIC SERVICES

WATER AND SEWER SETTING

Development in Chalfant is served by wells and septic systems.

WATER AND SEWER IMPACTS

The project is proposing a community water system for the project site (wells, two aboveground storage tanks, and an underground distribution system) and individual septic systems for the residences. All lots must connect to the community water system. The design of the water system is shown on Figure 6, Water, Propane and Sewage Plan in Appendix A. Policies and Design Standards in the White Mountain Estates Specific Plan require 1) all infrastructure to be installed in each phase of the project prior to the construction of any residential uses for that particular phase, 2) a method to ensure that on-site infrastructure will be maintained over the life of the project, and 3) visually offensive land uses, such as the water system components, to be screened. The Specific Plan also encourages the consolidation of the proposed water system with existing White Mountain Estates Mutual Water System, if feasible, and requires the water system to be constructed so that it may be consolidated in the future.

The installation of additional wells and 46 individual septic systems could potentially result in impacts to water quantity and water quality in the area, including impacts to the potable water supply for the existing White Mountain Estates subdivision. White Mountain Estates Specific Plan policies require the applicant to obtain well and septic system permits from the Mono County Environmental Health. Health Department requirements address the placement of wells and septic systems in order to avoid impacts to water quality.

The hydrogeologic study prepared for the project concludes that there is sufficient water in the aquifer underlying the project site to meet the estimated demand for the project without significant impacts to the aquifer. Impacts of the proposed water and septic systems on water resources in the area (including the water system for the existing White Mountain Estates subdivision) are discussed under Water Resources later in this chapter.

STORM DRAINAGE SETTING

There are no storm drainage systems in Chalfant.

STORM DRAINAGE IMPACTS

Proposed storm drainage improvements for the project are shown on Figure 5, Preliminary Grading and Drainage Plan (see Appendix A, Map Set). The natural drainage flow across the property is from east to west, from higher ground to lower ground, in the existing swales on-site. Proposed drainage improvements include a drainage easement across several of the lots that will connect with a drainage easement on the existing White Mountain subdivision. The proposed drainage easements flow in the same direction and area as the natural drainage on-site.

The drainage study originally proposed an onsite retention basin. The Mono County Department of Public Works had concerns about the retention basin (letter from Kelly Garcia dated May 2, 2005), stating that the proposed retention basin could create more difficulties than it resolved. As a result of that letter and subsequent discussions, the drainage plan was revised to focus on drainage ditches and easements.

The Drainage Study prepared for the White Mountain Estates Specific Plan calculated the natural runoff on-site from a 100-year storm event and the additional runoff generated by the proposed development during a 100-year storm event. The proposed drainage easements have been designed to contain the amount of runoff generated by the proposed development during a 100-year storm event. The project will not create additional runoff impacts in the area and will not result in significant impacts to storm drainage in the area.

SOLID WASTE SETTING

Chalfant has a solid waste landfill and transfer station located approximately one-half mile east of the community of Chalfant. The landfill accepts approximately 10 percent of the local waste stream; the remainder is either processed through the waste diversion program (i.e. recycled) or transferred to Benton Crossing Landfill located near Mammoth Lakes. Benton Crossing Landfill has a site life/capacity of 17 years, through late 2023 [Report of Disposal Site Information for Benton Crossing Landfill (RDSI)]. There are no solid waste collection services in Chalfant; residents are responsible for hauling their own waste to the transfer station or for contracting with a private hauler for trash pickup services.

SOLID WASTE IMPACTS

Benton Crossing Landfill has sufficient capacity to serve 46 additional single-family residences; the site life and loading rate calculations for the landfill were calculated using California Department of Finance growth projections for the unincorporated areas of Mono County (RDSI for Benton Crossing Landfill). The project will not create significant impacts to solid waste facilities or services.

ENERGY SERVICES SETTING

Most housing in Mono County uses a combination of energy sources, including electricity, propane, and wood. The 2000 US Census notes that all of the homes in the Tri-Valley are heated by propane or wood. Electricity in Chalfant is provided by Southern California Edison. Propane is supplied by local private firms. Firewood and wood products (pellets and pressed logs) are supplied by local private firms; firewood is also available from the Inyo National Forest with a firewood permit. New buildings in Mono County must comply with the California State Energy Efficiency Standards (Title 24 of the California Administrative Code). These energy efficiency standards regulate energy consumption for lighting, air heating and cooling, water heating, and ventilation.

ENERGY SERVICES IMPACTS

Electricity will be provided to the project by Southern California Edison. Specific Plan policies require propane to be the primary heating source for the project. Propane will be provided by an on-site propane distribution system with three 1,000 gallon propane tanks and underground distribution lines. Policies and Design Standards in the White Mountain Estates Specific Plan require all utility lines to be installed underground in compliance with Mono County General Plan policies and Land Development Regulations. Specific Plan policies also require any wood-burning appliances installed as secondary heating sources to be Phase II EPA certified in compliance with Mono County General Plan policies.

Energy consumption figures for Chalfant are not available. Energy consumption data for Bishop residential uses were used to calculate long-term energy consumption for the residential portion of the project since the climate in Bishop is similar to the climate in Chalfant.

The proposed single-family residential units are estimated to utilize the following amounts of energy annually at buildout (note: these are “worst-case” estimates for each energy source, see assumptions in the footnotes):

Electricity	16,000 kilowatt hours (kWh) per dwelling unit x 46 units = 736,000 kWh ¹
Propane	500-700 gallons ² per dwelling unit x 46 units = 23,000 – 32,200 gallons
Firewood	2 cords per dwelling unit x 46 units = 92 cords ³

Local purveyors of these resources have indicated that sufficient resources are available to serve the project (Southern California Edison, Eastern Sierra Propane, local wood purveyors in Bishop). The

¹ kWh use figures from June Lake Highlands EIR. Winter use might be higher in June Lake but summer use would probably be higher in Chalfant. Use figures were not available for Chalfant.

² This assumes that all appliances (washer, dryer, etc.) are gas. Cameron Riley, Eastern Sierra Propane, pers. Comm..

³ Jan Larsen, Senior Planner, Inyo County Planning Department, pers. comm..

propane will be provided through a centralized propane storage and distribution system. Mono County has required/requested recent large subdivisions of similar size to provide a centralized propane storage system to serve all subdivision lots in order to increase efficiency, reduce potential visual impacts, and increase safety. The project will not create significant impacts to energy resources.

LAW ENFORCEMENT SETTING

Law enforcement services in Chalfant are provided by the Mono County Sheriff. Two Resident Deputies are allocated to the Tri-Valley area. Each normally works 5 days per week, 8 hours per day. Normal coverage is provided from 8:00 am until midnight. For after hour emergencies, deputies are called out from their homes. The nearest Sheriff's sub-station is in Crowley Lake.

The Mono County Sheriff does not currently have any identified needs for additional personnel, equipment or facilities in the Chalfant area.

LAW ENFORCEMENT IMPACTS

The Mono County Sheriff's Department has indicated that although they do not foresee a need to add additional personnel to the department as the result of the proposed project, the project will create impacts to the department in the form of increased calls for service (during normal hours and after hours) and increased mileage on patrol vehicles which would necessitate earlier replacement of those patrol vehicles (Cole Hampton, Assistant Sheriff). Increased vehicle mileage and increased after-hours call-outs will increase costs for the Sheriff's Department.

Specific Plan policies require the development to contribute its share of the cost of additional law enforcement services in Chalfant. The project will be subject to the Mono County Development Impact Fees recently adopted for communities in the southern portion of the county. A portion of those development impact fees is allotted to the sheriff's department. With the implementation of those fees, the project will not create significant impacts to law enforcement services.

FIRE/EMERGENCY MEDICAL SERVICES SETTING

The Chalfant Valley Fire Department, a community services district, provides fire protection services to developed areas in Chalfant. The project site is within the sphere of influence boundaries of the district indicating that it is an area that should be served by the district. The Chalfant Fire Department is an all-volunteer force with limited equipment, most of which is housed in the fire station located on Valley Road in Chalfant. The department currently has three engines and various tankers with hoses that can also be used to fight fires.

The Fire Department has the following concerns about future development in Chalfant in general:

- The department does not have sufficient equipment or personnel to serve additional development.
- The department does not have a large enough station to store all its equipment inside now. If it acquires more equipment it will need additional storage facilities.
- The department does not have qualified personnel to comment on required fire flows; it relies on the State standards for minimum fire flow requirements and the placement of hydrants. The district is concerned that large-scale projects be made to adhere to these minimum standards.

- The department recently raised its fire mitigation impact fee but is concerned that it is still too low to adequately address the impacts of new development.
- The department is currently in the process of trying to plan for new development in Chalfant and to assess what it needs in terms of equipment, facilities, and personnel to serve the projected development for Chalfant.
- There is a perception that truck traffic on Highway 6 has increased in recent years, particularly after the Walker flood in 1997, and that accidents have increased as a result.
- Chalfant has experienced a number of car crash fatalities in the past year, some of them due to collisions with large trucks. There is a strong concern that traffic through Chalfant, and along Highway 6 throughout the Tri-Valley, needs to be slowed down to increase safety, particularly in community areas or anywhere residents may be entering or exiting the highway. There is a perception that turn lanes are needed along Highway 6 at certain access points to ensure safe access for local residents.
- The Tri-Valley area would like to have a paramedic station somewhere in the Tri-Valley.

The Fire Department also provides Basic Life Support (BLS) emergency medical services for the area. There are no paramedics or Advanced Life Support (ALS) services available in the Tri-Valley. Advanced Life Support (ALS) services are provided by paramedics from Bishop; the usual response time from Bishop is 20 minutes. Tri-Valley residents, along with the County, are currently in the process of determining the area's needs for paramedic services and how best to meet those needs.

FIRE/EMERGENCY MEDICAL SERVICES IMPACTS

The project will result in 46 single-family residences. The population is estimated to increase by approximately 117 persons, a 25 percent increase over Chalfant's population of 465 persons in 2000 and a 12 percent increase over the Tri-Valley population of 954 persons in 2000. Traffic is also anticipated to increase.

The project will create impacts to fire and emergency medical services in the Chalfant area. Those impacts could be significant since the population could increase by 25 percent. Fire mitigation fees will be collected at the time of development to offset the cost of providing service to the development but the department is concerned that those fees may not sufficiently mitigate the impact to the department.

In order to mitigate potentially significant impacts to fire and emergency medical services in Chalfant, proposed mitigation measures require the development to contribute its fair share of the cost of additional fire equipment and facilities to serve Chalfant. Specific Plan policies and plans also require the installation of fire hydrants, the provision of sufficient water storage to meet the required fire flows, and compliance with the county's Fire Safe Standards (roofing materials, house numbering, fire flows, defensible space, road grades). Proposed roads within the subdivision have been designed to County Road Standards to provide sufficient access for emergency vehicles. In addition, Specific Plan policies specify that landscaping on individual lots must comply with Fire Safe Standards and provides a list of suitable fire safe plants.

Prior to approval of the final tract map, the project proponent must provide the County with a "will serve" letter from the Chalfant Valley FPD, indicating its capability to serve the proposed development and its approval of fire protection and suppression components of the proposed project design. Fire mitigation fees will be collected at the time of development to offset the cost of providing service to the development.

With the proposed mitigation, the project will not create significant impacts to fire and emergency medical services in Chalfant.

SCHOOLS SETTING

Chalfant is within the boundaries of the Eastern Sierra Unified School District (ESUSD). There are no schools in Chalfant. The ESUSD has an elementary school and a small alternative high school in Benton. Edna Beaman Elementary serves grades K-8 and currently has 68 students in school and 4 in its day care program. High Sierra Academy serves grades 9-12 and currently has 7 students. Elementary students in Benton utilize Edna Beaman Elementary. Most elementary students in Chalfant apply for an interdistrict transfer to attend school in Bishop. The Bishop Union Elementary School District had 22 students from Chalfant during the 2003-2004 school year. Students from Chalfant attending elementary school in Bishop must provide their own transportation. Most high school students in the Tri-Valley attend high school in Bishop at Bishop Unified High School. Approximately 10-12 students from Chalfant attended high school in Bishop during the 2003-2004 school year. The ESUSD provides a bus to transport students from Benton, Hammil, and Chalfant to Bishop.

SCHOOLS IMPACTS

The estimated population growth from the project is 117 persons. If the new population follows the trends found in the Tri-Valley in the 2000 Census, 6 people will be younger than 5, 24 will be 5-17 years old, 72 will be 18-64 years old, and 15 will be 65 years or older. The project is estimated to result in 30 pre-school and school aged children.

High school students from Chalfant go to school in Bishop because there is no comprehensive ESUSD high school close enough for them to attend. The ESUSD operates a small, specialized high school in Benton, the High Desert Academy, which can serve approximately 10 students. The ESUSD owns a bus and pays a driver to drive high school students to Bishop. The State ADA funds for those students go to the high school in Bishop.

Elementary-aged students who live in Chalfant are within the jurisdiction of Edna Beaman Elementary in Benton but most attend school in Bishop. To attend school in Bishop, elementary-aged students must get an interdistrict transfer approved by the ESUSD and provide their own transportation. The State ADA funds for those students go to the elementary school in Bishop.

Mark Geyer, the Superintendent of the Bishop Joint Union High School District and the Bishop Union Elementary School District, has indicated that school enrollment is currently declining in Bishop and there would be no impacts to the school districts from the proposed development.

School mitigation fees will be collected at the time of development to offset the cost of providing service to the development. With the proposed mitigation fees, the project is not anticipated to create significant impacts to the ESUSD. The superintendent of the Bishop schools has indicated that there will be no impacts to Bishop schools from the proposed development.

The ESUSD has indicated that it will be applying for state funds for land acquisition and school development in Chalfant. The current plan is to acquire 40 acres, probably BLM land, to build an elementary school, middle school, and high school. The development of the schools would be a gradual process, timed to coincide with growth in Chalfant and the development of a population base for the schools.

RECREATIONAL SETTING

Chalfant has a community center and park owned and operated by Mono County. The park has playground equipment, a grass area, a baseball field, tennis court, and restrooms. There are no other developed recreational facilities in the area. The nearest developed recreational facilities are in Bishop, approximately 13 miles south of Chalfant. Undeveloped recreational activities occur on the public lands throughout the Tri-Valley.

The County has identified a need to update the playground equipment at the Chalfant park at an estimated cost of \$ 70,000 (Mono County Capital Improvement Program).

RECREATIONAL IMPACTS

At buildout, the project would increase the population in Chalfant by 117 persons, 30 of them younger than 18. This is a 25-percent increase over the existing population in Chalfant. This could create a potential impact to the park facilities in Chalfant, particularly to the playground equipment.

Proposed mitigation requires the development to contribute its share of the cost of additional recreational facilities required to serve the development. Mono County generally imposes a fee of \$1,000 per lot to offset impacts to recreational facilities and services from large development projects. With mitigation, the project will not create significant impacts to recreational facilities and services in Chalfant.

CONCLUSION

The project will result in potentially significant impacts to fire and emergency medical services; with mitigation those impacts will be reduced to less than significant levels. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies. The project will not result in significant impacts to other public services; no mitigation measures are proposed.

PUBLIC SERVICES MITIGATION

The following proposed mitigation measures mitigate the environmental impact(s) identified in the previous section:

- PS-1 The development shall comply with California State Fire Codes as well as with the Mono County Fire Safe Requirements (Mono County Land Development Regulations, Chapter 22), pertaining to emergency access, signing and building numbering, emergency water supplies, and vegetation modification (White Mountain Estates Specific Plan Program 13-A)
- PS-2 The project shall comply with the following minimum requirements in order to increase fire safety:
- The minimum space between buildings shall be 30 feet.
 - Each house/parcel shall have a standardized propane shutoff box.
 - The propane tanks for the project shall be located on the lot designated for utility uses.
 - The facilities for the propane tanks shall include a containment facility and automatic shutoff valves.
 - The project shall have illuminated house numbers on each residence.
 - The Fire District shall review the hydrant plan prior to approval of the Final Tract Map.
 - A hydrant shall be installed by the water tanks.

- Prior to approval of the Final Tract Map, the project proponent shall provide the County with a "will serve" letter from the Chalfant Valley FPD, indicating its capability to serve the proposed development and its approval of fire protection and suppression components of the proposed project design. Fire mitigation fees shall be collected as part of the building permit application process (White Mountain Estates Specific Plan Program 13-B).
- PS-3 As part of the building permit application process, the applicant shall pay the fees established by the Mono County Development Impact Fee Ordinance to offset potential impacts to law enforcement and emergency medical services (White Mountain Estates Specific Plan Programs 14-A and 15-A).
- PS-4 As part of the building permit application process, collect school mitigation fees (White Mountain Estates Specific Plan Program 16-A).
- PS-5 Prior to recording the final map, the applicant shall pay \$1,000 per lot to offset impacts to recreational facilities and services in Chalfant, as required by the Mono County Department of Public Works (White Mountain Estates Specific Plan Program 17-A).

Note: Additional mitigation concerning potential fire hazards is contained in the hazards section of this chapter. Additional mitigation concerning potential impacts to water resources is contained in the water resources section of this chapter.

PUBLIC SERVICES MITIGATION MONITORING

See mitigation monitoring plan in the final EIR.

GEOLOGY AND SOILS

GEOLOGY/SOILS SETTING

The Earthquake Fault Zone Hazard Evaluation prepared by Sierra Geotechnical Services for the project provides information on the geologic setting, seismic setting, and soils. The valley is filled with sedimentary deposits layered with volcanic rocks. The predominant source of alluvial valley fill is the White Mountains; that fill consists of a heterogenous mix of gravel, sand, silt, and clay. The interstratified volcanic layer is Bishop Tuff and is composed primarily of pumice and welded ash. The project site is located on a faulted alluvial fan that extends west from the White Mountains between Piute Canyon to the north and Coldwater Canyon to the south.

Review of the US Department of Agriculture's soil maps for the area show that the project site is located in an area with thermic soils on alluvial fans and fan terraces with very deep, well-drained, nearly level to strongly sloping soils that formed in mixed alluvium. Two distinct soil units underlay the site. Soils to the east and west are younger fan terrace alluvial soils with 15 percent contrasting inclusions. The Unified Soil Classification System (USCS) classifies these soils as gravel and sand between 1 and 60 inches in depth with a Liquid Limit between 15-25 percent and a Plasticity Index of NP-5. Soils in the central portion of the site are older fan terrace alluvial soils containing 15 percent contrasting inclusions. Those soils are classified as gravel and sand between 1 to 60 inches in depth with a Liquid Limit between 20-30 percent and a Plasticity Index of NP-5 and NP-10.

The Preliminary Hydrogeologic Investigation for the project notes that a well drilled on Lot 40 intersected alluvial gravels and sand to a depth of 79 feet below ground surface (bgs) and sand with gravel zones from 79 feet bgs to 390 feet bgs. The gravel generally consists of volcanic and

metasedimentary lithic fragments with varying amounts of silt and fine to coarse-grained sand. The sand contains quartz, some feldspar and other lithic fragments of volcanic and metasedimentary composition.

WIND CONDITIONS SETTING

The MEA identifies the Chalfant area as subject to wind erosion (MEA Figure 18F). The prevailing wind direction in the area is from the north ten months of the year and from the south in November and December, based on data collected at the Bishop Airport climatological station, the nearest station to Chalfant (see www.ncdc.noaa.gov). That station has been in operation since 1930. Average annual wind data for the Bishop Airport are shown in Table 3; mean wind speed and peak gust speed are in miles per hour (mph).

The weather station at Bishop is located at the airport, 2 ½ miles east of town, on the floor of the Owens Valley which is oriented northwest to southeast and at Bishop is 12 miles wide, level, and semi-arid. The valley is enclosed by the 12,000 to 14,000 feet peaks of the Sierra Nevada to the west and the 12,000 to 14,000 feet peaks of the White Mountains to the east. The northern end of the valley is partially cut off by 6,000 to 8,000 feet mountains located north of Benton. During the summer and autumn, northerly winds occur in the early morning and late evening. In the heat of the afternoon, the wind is southerly and occasionally strong.

Table 3 Climatic Wind Data, Bishop Airport

Month	Prevailing Wind Direction	Mean Wind Speed	Peak Gust
August	North	8 mph	60 mph
February	North	8 mph	63 mph
March	North	10 mph	58 mph
April	North	11 mph	62 mph
May	North	9 mph	62 mph
June	North	9 mph	54 mph
July	North	8 mph	60 mph
August	North	8 mph	70 mph
September	North	8 mph	47 mph
October	North	9 mph	52 mph
November	South	8 mph	66 mph
December	South	7 mph	68 mph
Annually	North	9 mph	70 mph

GEOLOGY/SOILS AND WIND EROSION IMPACTS

Soils in the Chalfant area are primarily alluvial soils, sand and silt, overlying a layer of volcanic rock (Bishop Tuff). These soils tend to be highly erodible. The Chalfant area in the vicinity of the project site has been identified as an area subject to wind erosion and stream sheet rill erosion (MEA Figure 18F). The prevailing wind direction in the area is from the north ten months of the

year and from the south in November and December. Average annual wind speeds are 9 miles per hour with annual peak gusts of 70 miles per hour (see Table 2). The project site is located on the alluvial fan at the base of the White Mountains where sheet rill erosion may occur during heavy storm events.

Site disturbance caused by infrastructure development, road construction, and building construction would contribute to the potential for soil erosion in the area, particularly during periods of heavy wind and heavy runoff from storm events. Dust resulting from site disturbance and soil erosion could affect existing residential development in the area. The potential for soil erosion will continue over the life of the project if disturbed areas are not addressed. In addition, dust from surrounding undeveloped, sparsely vegetated areas could affect the proposed housing. The potential for erosion is a potentially significant long-term effect of the project that can be reduced to less than significant levels with mitigation.

SEISMIC SETTING

Earthquakes occur frequently in the Eastern Sierra and in Mono County. Review of the USGS website shows that earthquakes occur in Mono County, particularly in the Long Valley Caldera, weekly and almost daily. The majority of those earthquakes are under Magnitude 3 and are not felt by people. Associated seismic and geologic hazards such as landslides, rockfalls, and ground failure have occurred in conjunction with earthquakes. The Mono County MEA (Chapter 19, Natural Hazards) provides the following information concerning seismic hazards in Mono County:

Mono County covers an area that is relatively young by geologic standards. It is located at a stress point where the earth's crustal plates are exerting opposite pressures against each other. This combination creates both "tectonic" earthquakes (e.g. land mass movement) and volcanic activity that can trigger earth shaking (e.g. magma chamber movement and lava dyke formations). Up-to-date information concerning earthquake activity in the county is available on the US Geological Survey website, www.usgs.gov.

The primary seismic hazard in the County is strong to severe groundshaking generated by movement along active faults. The entire county, except for a small portion of the Sierra crest, is in an area where intense groundshaking is possible. This area has been designated as a Seismic Zone 4, the zone of greatest hazard defined in the Uniform Building Code.

In addition to tectonic movement, the Long Valley-Mammoth Lakes region has experienced numerous earthquakes caused by the movement of magma below the earth's surface. The oval shaped Long Valley Caldera spans an area approximately ten by twenty miles, and is among the largest volcanoes in the continental United States. For additional current information on the Long Valley caldera, see the US Geological Survey website, www.usgs.gov.

Ground failure induced by groundshaking includes liquefaction, lateral spreading, lurching, and differential settlement, all of which usually occur in soft, fine-grained, water-saturated sediments, typically found in valleys. During the 1980 Mammoth Lakes earthquake sequence, ground failure was prevalent at Little Antelope Valley, along margins of the Owens River in upper Long Valley, along the northwest margins of Lake Crowley, and along Hot Creek Meadow.

All of Mono County is situated within Seismic Zone 4, and consequently new construction in the County must comply with stringent engineering and construction requirements. In addition, existing buildings that may be subject to seismic hazards must comply with new requirements of the unreinforced masonry building law (Government Code Section 8875).

Subsidence is caused by tectonic movement of the earth; by withdrawal of fluids such as water or oil; by compaction which occurs when copious amounts of water are applied to an arid area; or by severe loading, such as when large bodies of water are impounded. The most dramatic tectonic subsidence occurs during earthquakes, when areas can drop suddenly. During the May 1980 sequence of earthquakes near Mammoth Lakes, there were several locations near the Hilton Creek Fault where the ground surface dropped about four inches on the northeast side of fractures. Along the "Mammoth Airport fault zone", up to 12 inches of vertical offset on the east side of ruptures was observed (Taylor and Bryant, 1980). Another tectonic change in ground elevation which occurs in Mono County is associated with the movement of magma beneath Long Valley Caldera.

The Chalfant area has experienced strong earthquake activity in the past. Dave Hill, Scientist-in-Charge of the US Geological Survey's Long Valley Observatory, provided the following information concerning the most recent major earthquake in the Chalfant area:

The Chalfant Valley earthquake ($M=6.4^4$) occurred on July 21, 1986. It was preceded by a month-long foreshock sequence that began with a $M=2.6$ earthquake on July 3 and built up to a $M\sim 5.8$ (as I recall) earthquake just 24 hours before the mainshock. The area had shown virtually no previous earthquake activity (since the mid-1970s anyway). The aftershock sequence was also rather energetic including three $M>5.5$ earthquake (the largest was close to $M\sim 6$). I think the associated damage was minimal aside from rock falls in the mountains and a number of mobile homes in the Chalfant area that were toppled from their (unstable) foundations.

The epicenter of the 1986 earthquake was within the volcanic Tablelands to the west of the project site, at a depth of 4 to 6 miles (Ehlert, 2002, p. 7). After that earthquake, small surface cracks were observed for a distance of 9 miles along the existing scarps of the White Mountain fault between Piute Canyon and Silver Canyon. Those cracks were comprised of small, discontinuous zones of northerly trending cracks and fissures with right-lateral slip and east-west extension (Ehlert, 2002, p.8).

SEISMIC IMPACTS

Probabilistic Seismic Hazard Assessment (PSHA) maps prepared by the California Geological Survey (CGS) and the US Geological Survey (USGS) show the earthquake shaking hazard for areas throughout Mono County. Earthquake shaking hazard is what causes most damage to people and property during an earthquake. The valley floor in the Tri-Valley, where Chalfant is located, is in the middle in terms of earthquake shaking hazards.

Maps prepared by the California Geological Survey (CGS) and the USGS also show the magnitude of the earthquake that causes the dominant hazard for peak ground acceleration at 10% probability of exceedance in 50 years with alluvial site conditions. In the Tri-Valley it would be a magnitude 7.0-7.5 earthquake.

The Mono County Emergency Operations Plan (EOP) notes that:

Earthquakes occur all the time in Mono County, most of them of very small magnitude and not felt by people. Most people do not feel tremors under magnitude 3. Major damage to well-built structures does not occur until the earthquake is stronger than magnitude 5. Each unit of magnitude represents an earthquake wave amplitude 10 times greater than the next lower number. Each unit of magnitude corresponds to almost 30 times more energy than the previous magnitude. Seismologists do not know when a large earthquake will hit the Eastern Sierra again but do know that one will occur.

⁴ M = Magnitude.

Moderate to severe groundshaking could affect structures on the site; in Mono County, all structures must comply with the requirements of the Uniform Building Code for Seismic Zone 4 in order to mitigate the potential effects of seismic hazards. Moderate to severe groundshaking can also result in seismically induced settlement, particularly on alluvial soils such as those on the project site. In compliance with the requirements of the Mono County Subdivision Ordinance, the applicant must submit a soils report prior to recording the final map for this project. Depending on the results of that report, subsequent structural specifications will address potential settlement issues.

Due to the seismic hazards in the area, fault and seismic studies were conducted for the project site. Keith W. Ehlert, Consulting Engineering Geologist, prepared a fault and seismic investigation for proposed residential development on the western portion of the project site (the area proposed for 38 half-acre lots). The work conducted for the investigation included analysis of aerial photographs, field mapping, trench logging, and soil-stratigraphic analysis.

Ehlert's study was amended several times in response to peer review of the original document. That study concluded that none of the faults cross the western portion of the project site; as a result, a detailed analysis of faulting (slip rate, recurrence interval, etc.) was not warranted for that portion of the project site. The alluvial fans in proximity to the site were analyzed using criteria such as drainage pattern, incision depth, surface morphology, desert pavement and varnish, and morphostratigraphic relations. The report concludes that:

"The alluvial fan deposits at the site are generally within the early Pleistocene Qfo and the late Pleistocene Qfi categories with only small areas of Holocene-age Qfy along the east margin of the [*western portion of the*] site and at the southeast corner [*of the western portion of the site*], and within narrow (~10 feet wide) shallow (~3-4 feet deep) gullies that have funneled Holocene deposits through the site the central valley floor." (Ehlert, 2002, p. 11)

The report also notes that the dominant character of the surface at the site is a:

"...smooth, mature, surface with strongly developed desert pavement and dark varnish on well-graded, tightly packed, interlocking pebbles. These characteristics are typical of older Pleistocene surfaces; such an advanced degree of pavementation commonly typifies surfaces with ages of 5×10^4 to 10^5 ." (Ehlert, 2002, p. 11)

Finally, Ehlert notes that the area upslope and east of the site he studied (i.e. the eastern portion of the current project site) has some of the more prominent fault ridges in the region. He concludes that this has occurred because:

"...these features are between major drainages and are in a more stable environment, sheltered from the severe erosion and deposition that has occurred in the canyons to the north and south." (Ehlert, 2002, p. 11)

As Ehlert noted, the eastern upslope portion of the project site has several prominent fault scarps visible. It is also within an Alquist-Priolo Fault Hazard Zone (Mono County MEA Map 34F). As a result, an additional Earthquake Fault Zone Hazard Evaluation was prepared for the eastern portion of the project site by Sierra Geotechnical Services Inc.. That study provides the following information concerning the tectonic setting for the site:

"The White Mountain APEFZ fault zone traverses directly through the central section of the site and extends from the Milner Canyon alluvial fan southward to the Waucoba Embayment (dePolo and

Ramelli, 1987). The central section contains the ground fracturing associated with the $M_s=6.2$ July 1986 Chalfant Valley earthquake (dePolo and Ramelli, 1987; Smith and Priestly, 1988)....The APEFZ fault zone is approximately 2,000 feet wide at the south edge of the site and widens to 2,600 feet at the northern property line. The zone trends along and slightly west of the mountain front within alluvial fan deposits. Traces of the central segment are characterized by linear and shutter ridges, uphill-facing scarps, and right-laterally offset stream channels. According to the 1997 UBC, the White Mountain frontal fault is about 105 km in total length, has a slip rate of 1.0 mm/yr, has an $M_{MAX} = 7.1$, and a recurrence interval of approximately 1,224 years.”
(Sierra Geotechnical Services, Inc, 2005, p. 4)

Sierra Geotechnical Services Inc. used review of published geologic literature, analysis of aerial photographs, a site reconnaissance, a subsurface investigation (trenching), and a probabilistic seismic hazard analysis to investigate conditions at the project site. Based on the data reviewed, Sierra Geotechnical Services Inc. provided the following conclusions, professional opinions, and recommendations concerning potential development on the eastern portion of the project site:

- “1. Based upon review of available data, field exploration and geologic analysis, it is our opinion that the subject site is suited and safe for the use intended from a geologic standpoint, provided the following are considered and incorporated during planning and construction.
2. Building setback lines measuring a minimum of 25 feet and corresponding ‘Habitable Zones’ have been established for the site, as illustrated and color-coded green on the enclosed Site Geologic Map (see Figure 13 in Appendix A, Map Set).
3. The subject site is located in Bishop Basin, a fault-bound, down-dropped block typical of the basins found in the Basin and Range Province. The fault that bounds the basin’s east side is the White Mountain frontal fault system.
4. The White Mountain frontal fault has been zoned by the State of California according to the Alquist-Priolo Earthquake Fault Zone Act (Davis, 1985), and the site lies entirely within this zone.
5. Five significant active faults and countless subsidiary shears and cracks are known to exist and have been mapped within the limits of the subject site.
6. Evidence of primary surface rupture on the subject site was observed, mapped and published following the July 21, 1986 Chalfant Valley earthquake sequence, and they correspond to Significant Fault Nos. 4 and 5.
7. Review of aerial photographs indicated evidence of active faulting across the subject site.
8. Evidence for active faulting was observed during the site reconnaissance and during the subsurface fault investigation.
9. According to the 1997 UBC, the White Mountain frontal fault is approximately 105 km in total length, has a slip rate of 1.0 mm/yr, has an $M_{MAX} = 7.1$, and a recurrence interval of approximately 1,224 years.
10. A deterministic seismic analysis performed for the subject site indicates that the peak horizontal ground acceleration estimated for a maximum earthquake event within the specified radius is 0.49g.
11. Vertical ground accelerations are estimated to be approximately 2/3 of the horizontal acceleration for faults in the Basin and Range Province.
12. The largest estimated site acceleration based historical earthquake data was 0.28g, which occurred during the July 21, 1986 Chalfant Valley earthquake sequence.
13. Based on the results of the probabilistic analysis, the estimated ground acceleration during an Upper-Bound Earthquake and a Design Basis Earthquake for the site are 0.45g and 0.34g, respectively,
14. No known absolute-age data for the alluvial sediments were available at the time this report was prepared; however, the youngest fault-related soil deposits on the subject site are likely less than or equal to Recent age ($\leq 11,000$ years old).

15. The subject site, Chalfant Valley and the eastern California region are subject to naturally occurring earthquakes; however, it should be noted that the time, location or magnitude of such an event cannot be accurately predicted at this time.
 16. Geologic inspections should be made by SGSI during future grading and development in order to confirm the findings contained in this report.
 17. If loose trench backfill material is encountered during future foundation construction, the loose material should be removed and compacted.
- (Sierra Geotechnical Services, Inc., 2005, pp. 22-23)

The report prepared by Sierra Geotechnical Services Inc. also addresses secondary earthquake hazards that may be associated with a relatively large earthquake including shallow ground rupture, soil lurching, liquefaction, lateral spreading and dynamic settlement, and slope failures and landslides.

Significant ground rupture is generally expected to occur along pre-existing fault breaks. Mitigation of the hazard involves identifying the major faults that may produce ground rupture and avoiding construction over their surface traces. The "Habitable Areas" identified on the Site Geologic Map (Figure 13, Appendix A, Map Set) identifies areas that avoid onsite faults.

Ground lurching is the rolling motion of the ground surface generated by the passage of seismic surface waves. Ground lurching is most severe when the thickness of soft sediments underlying a structure varies considerably. The potential for lurching under the identified "Habitable Areas" is considered low due to the potentially compressible soils below existing grade. The hazard may be further reduced if the topsoil onsite is removed and properly compacted during development.

Ground shaking occurs during an earthquake when two blocks of the earth's crust break and slip against each other. Ground shaking generally increases with increasing magnitude and is greatest at or near the epicenter. Given the seismic history of the area, it is reasonable to assume that large earthquakes will occur again and will produce strong ground shaking at the subject site. The hazards associated with ground shaking are mitigated through imposition of Uniform Building Code requirements for the applicable seismic zone.

Liquefaction commonly occurs in soils of low cohesion that are saturated by groundwater in areas with shallow groundwater (<50 feet below the ground surface). Depth to permanent groundwater has been measured at over 200 feet below the ground surface on the project site; the potential for liquefaction is considered to be very low.

Lateral spreading and dynamic settlement occurs because different materials move differently in response to earthquake events. Fill placed on an incline may settle more than fill placed on horizontal ground. At contact points between manmade fill and natural alluvium/bedrock occurs, a potential for differential settlement may occur due to the different shaking characteristics between them. Total dynamic settlement as well as differential settlement may exceed the tolerances calculated by a structural engineer for any proposed structure.

Slope failures and landslides occur on steep hillside terrain, particularly when it is wet or saturated. Three surficial landslides were identified on the eastern portion of the project site (see Figure 13, Appendix A). Landslide susceptibility on the eastern portion of the site is considered to be moderate. However, since the proposed "Habitable Areas" are located outside the landslide-prone areas, landslide hazards onsite are not considered significant.

VOLCANIC SETTING

The Long Valley Caldera was created approximately 760,000 years ago when a large amount of magma erupted explosively, collapsing the ground to form the 10 by 20-mile oval depression known as the Long Valley Caldera. Clusters of smaller volcanic eruptions have occurred in the caldera at roughly 200,000-year intervals. About 100,000 years ago, the most recent of these eruptions formed the Mammoth Knolls, low hills just north of the Town of Mammoth Lakes.

Volcanoes in the Mono-Inyo chain of craters have erupted more recently. Mammoth Mountain was formed by numerous eruptions 220,000 to 50,000 years ago. Mono and Inyo Craters were created between 400,000 and 5000 years ago. Panum Crater and Inyo Craters last erupted 500 to 600 years ago. The most recent eruptions in the chain occurred at Paoha Island, on Mono Lake, about 250 years ago.

A period of ongoing geologic unrest in the Long Valley area began in 1978 with a magnitude 5.4 earthquake centered 6 miles southeast of the caldera. Since then earthquake activity has increased. The most intense swarms occurred in May 1980 and included four strong magnitude 6 earthquakes. Between 1979 and 1980, the center of the caldera rose almost a foot, after decades of stability. The swelling continues, and by early 2000 totaled nearly 2.5 feet, indicating there is new magma rising beneath the caldera.

During the early 1990s, trees began dying at several places on Mammoth Mountain at the southwest edge of Long Valley Caldera. Studies showed that the trees were being killed by large volumes of carbon dioxide gas (CO₂) seeping up through the soil from the magma below. Such emissions of volcanic gas, as well as earthquake swarms and ground swelling, commonly precede volcanic eruptions (USGS Fact Sheet 108-96).

VOLCANIC IMPACTS

The draft Multi-Jurisdictional Local Hazard Mitigation Plan for Mono County and Mammoth Lakes notes the following concerning the future potential for volcanic activity in Mono County:

Volcanoes have been active in the area for millions of years and future eruptions are certain to occur. The pattern of volcanic activity over the past 5,000 years suggests that the next eruption in the Long Valley area will probably occur along the Mono-Inyo volcanic chain; the probability of such an eruption occurring in any given year is less than 1% (USGS Fact Sheet 073-97). Based on eruption frequency along the Mono-Inyo volcanic chain over the past 5,000 years, the probability of another eruption is roughly 1 in 200 (~0.5%) per year. Continued unrest of the sort that has occurred since 1980 results in a slightly elevated probability (but still generally less than 1% per year).

As long as increased volcanic unrest continues in the Long Valley area (earthquake swarms, ground deformation, CO₂ gas emissions), the chances of an eruption occurring in the future will remain somewhat increased (USGS Fact Sheet 073-97). Evidence from large volcanic systems worldwide shows that unrest can continue for decades or centuries without leading to an eruption but may also result in eruptions after short periods of unrest (USGS Fact Sheet 073-97). To provide timely warning prior to an eruption, scientists from the USGS Volcanic Hazards Program continue to monitor geologic unrest in the Long Valley Area.

Due to the uncertainty concerning future volcanic eruptions, potential impacts from volcano hazards are not considered a significant effect and no mitigation is proposed.

LANDSLIDE SETTING

The Mono County MEA (Chapter 19, Natural Hazards) provides the following information on landslides in Mono County:

Rockfalls and landslides are particularly common along the very steep slopes of the eastern scarp of the Sierra Nevada, where talus slopes provide evidence of abundant past rockfalls. During the winter and spring months, rockfalls can be lubricated with snow and ice and can become extremely fast moving and destructive. The May 1980 earthquakes triggered numerous rockfalls, especially at Convict Lake and in McGee Canyon (Bryant, 1980) and "spectacular rockfalls " were observed in Chidago Canyon and the White Mountains during the July 21, 1986 earthquake in Chalfant Valley (Smith, 1987). Landslides in areas of hilly and mountainous terrain can be triggered by groundshaking, heavy rains or human activities such as road cuts, grading, construction removal of vegetation, and changes in drainage.

Mudflows involve very rapid downslope movement of saturated soil, sub-soil, and weathered bedrock. Large mudflows, such as the one that occurred in 1989 in the Tri-Valley area, can be destructive, particularly at the mouths of canyons. The movement of soil and debris by mudflow and other landslides over time is evident in the large alluvial fans at the edges of valley areas.

The Site Geologic Map (Figure 13 in Appendix A Map Set) prepared by Sierra Geotechnical Services, Inc., for the eastern portion of the project site shows recent landslide activity on the site. Landslide susceptibility on the eastern portion of the site is considered to be moderate. However, since the proposed "Habitable Areas" are located outside the landslide-prone areas, landslide hazards onsite are not considered significant.

LANDSLIDE IMPACTS

The Site Geologic Map (Figure 13 in Appendix A Map Set) prepared by Sierra Geotechnical Services, Inc., for the eastern portion of the project site shows recent landslide activity on the site. Landslide susceptibility on the eastern portion of the site is considered to be moderate. However, since the proposed "Habitable Areas" are located outside the landslide-prone areas, landslide hazards onsite are not considered significant.

MINERAL DEPOSITS SETTING

The MEA identifies the area as MRA 2, an area where:

... adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence. This area shall be applied to known mineral deposits or where well developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high (MEA Figure 17 L/M).

MINERAL DEPOSITS IMPACTS

The MEA identifies the site as an area where there is a high likelihood that significant mineral deposits are present. The proposed development of the site, with residential and commercial uses, would preclude development of any mineral resources in the short-term but would not result in significant irreversible long-term impacts to any mineral resources. No mitigation is proposed.

CONCLUSION

The project could result in potentially significant impacts to Geology and Soils; mitigation measures are required to reduce impacts to less than significant levels. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies.

GEOLOGY/SOILS MITIGATION

The following proposed mitigation measures mitigate the environmental impact(s) identified in the previous section:

- GS-1 A final Grading Plan based on project phasing and based on the preliminary grading and drainage plan in this document, must be approved by the Mono County Department of Public Works prior to recording the Final Tract Map. The Grading Plan must include a comprehensive erosion and sediment transport control plan. Grading shall be minimized; structures shall be designed to fit the site (White Mountain Estates Specific Plan Conservation Standard CS-8).
- GS-2 Building envelopes and driveways shall be established on the Final Phased Tract Maps for all lots adjacent to drainage channels, all lots affected by Alquist Priolo fault hazards, and lots on which Secondary Units may be allowed (for each particular phase). The land use plan shall also indicate lots where Secondary Units may be allowed. On lots larger than one acre in size, where large animals such as horses are allowed, animal confinement areas shall also be established on the Final Tract Map in order to reduce site disturbance, protect vegetation, and to ensure that there is sufficient area for the leach field, replacement field, and animal areas (White Mountain Estates Specific Plan Conservation Standard CS-9).
- GS-3 Building envelopes for each residential parcel shall be located to avoid development on ridgelines or ridgetops, when feasible, and to minimize cut and fill (White Mountain Estates Specific Plan Conservation Standard CS-10).
- GS-4 In order to minimize the potential for dust erosion and visual impacts, land disturbance (grading, cut and fill) for road construction, infrastructure installation, and building construction shall be limited to the areas identified on the Final Tract Map for roads, utilities, building envelopes, and driveways (White Mountain Estates Specific Plan Conservation Standard CS-11).
- GS-5 Dust generated during construction shall be controlled by the use of watering or other Best Management Practices. All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage (White Mountain Estates Specific Plan Conservation Standard CS-12).
- GS-6 Speed limits on the construction site shall be reduced to minimize dust and windborne erosion (White Mountain Estates Specific Plan Conservation Standard CS-13).
- GS-7 Construction materials (rock, debris, etc.) that are not utilized as road fill shall be removed to a designated landfill or other approved site (White Mountain Estates Specific Plan Conservation Standard CS-14).
- GS-8 The project proponent shall prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit a Notice of Intent to comply with provisions of the State Water Resources Control Board's Stormwater NPDES Permit for Construction Activities (White Mountain Estates Specific Plan Conservation Standard CS-15).
- GS-9 All clearing, grading, earth moving, or excavation activities shall cease during periods or high winds (i.e. greater than 25 miles per hour averaged over one hour) (White Mountain Estates Specific Plan Conservation Standard CS-16).
- GS-10 Adjoining streets shall be washed or swept clean of tracked-out vehicle dirt (White Mountain Estates Specific Plan Conservation Standard CS-17).

- GS-11 All material transported on-site or off-site shall be sufficiently watered or securely covered to prevent excessive amounts of dust (White Mountain Estates Specific Plan Conservation Standard CS-18).
- GS-12 All trucks hauling excavated or graded material off-site shall comply with State Vehicle Code Section 23114, which contains requirements for covering loads so materials do not blow or fall from a truck (White Mountain Estates Specific Plan Conservation Standard CS-19).
- GS-13 The applicant shall be required to submit a soils report or process a soils waiver report. Any such report or waiver shall be reviewed and approved by the Director of Public Works, according to the provisions of Mono County Code Section 17.36.090 (White Mountain Estates Specific Plan Conservation Standard CS-32).
- GS-14 All development on-site (structures, utilities) shall comply with the requirements of the Uniform Building Code for Seismic Zone 4 (White Mountain Estates Specific Plan Conservation Standard CS-33).

GEOLOGY/SOILS MITIGATION MONITORING

See mitigation monitoring plan.

VEGETATION AND WILDLIFE

VEGETATION SETTING

The following information on vegetation is excerpted from *the Botanical Report for the Proposed White Mountain Estates Housing Site* prepared by James Paulus in 2004. The complete text of that report is included in the appendices. The Botanical Report included a literature search for sensitive species and field surveys performed in April and May of 2004. The field surveys were conducted floristically, using wandering parallel transects. The Botanical Report includes a list of all plant species encountered during the field surveys. Paulus provides the following overall assessment of the plant communities on the project site:

Vegetation cover within the study area is for the most part provided by diverse desert-adapted species that form a rather uniform-appearing scrub. The shrub crowns tend to be regularly spaced. Above the elevation 4430 ft and below 4560 ft (1350-1390 m), faulting and erosion have created a zone of steeper, rougher topography. Several gullies there exhibit evidence of ephemeral runoff flows conveyed in 2004. On the longer term, it appears that the deepest gullying has formed at one relatively narrow contour within this zone, where faulting is expressed as an actively eroding yet relatively densely vegetated scarp. Narrow, nearly impassable patches of scrubby riparian vegetation dominated by willows are associated with artesian spring flow in two of the gullies that have formed in this area. The southernmost of these two springs has been disturbed by recent construction of a small impoundment structure. Despite the potential impacts of current water impoundment and diversion, the perennial flow from the southern spring supports a small marsh community embedded with the riparian scrub.

The desert scrub and artesian spring habitats within the study area support four plant communities (see Figure 2). Shadscale scrub covers 57.3 acres, on moderate to steep slopes above and below the fault scarp. Big Sagebrush Scrub covers 5 acres and is associated with the fault zone's eroding scarp and artesian spring flow. Modoc-Great Basin Riparian Scrub covers 0.6 acres, also in the spring area. Transmontane Freshwater Marsh covers 0.01 acres in the spring area. The last three plant communities are very different from each other and from the surrounding Shadscale Scrub.

They differ in terms of species composition and structure (average height and cover) and moisture requirements. A complete list of plant species found on-site is included in the Botanical Report in Appendix A.

SHADSCALE SCRUB

Shadscale Scrub is considered to be a regionally common and widespread community (Paulus, p. 6). Total Shadscale Scrub cover on the project site is 20 percent and the average community height is 1 to 2 feet. There is little or no plant litter accumulation. Just downslope of the project site, the Shadscale Scrub transitions to a rabbitbrush-dominated scrub on the valley floor; just upslope of the project slope it transitions to a mixed sagebrush scrub.

Shadscale scrub on the project site includes shadscale, hopsage, four-wing saltbush, and winterfat that together comprise approximately 50 percent of the ground cover with shadscale being the most common by far. Indigo bush, bud sage, rubber rabbitbrush, Nevada ephedra, cotton thorn, burrobrush, and spiny menodora are usually present at low frequencies but can dominate the stand in small areas. Indigo bush, along with Nevada dalea⁵, provide up to 60 percent of the shrub canopy on slopes less than 15 percent, but only where desert pavement⁶ is relatively well-developed or has remained relatively intact. Silver cholla occurs as a minor shrub component. There are no grasses other than a few desert ricegrass.

Native perennial and annual herbs grown under the shrubs, giving the Shadscale Scrub an open appearance. The most common perennial herbs include wire lettuce, desert aster, desert trumpet, and wishbone bush. The most common annual herbs include Nevada gilia and spineflower. Stands of skeletal stems indicate a much greater annual abundance, but not necessarily, a greater diversity, occurred during the relatively wet 2003-growing season.

BIG SAGEBRUSH SCRUB

Big Sagebrush Scrub is also a regionally common and widespread community type. On the project site it is strongly associated with alkaline soils occurring along the eroding fault scarp. It supported no annuals during the field survey in 2004 and shadscale was absent from the canopy. Big sagebrush dominated the plant community, with an average height of 3 feet (although some individuals have reached 10 feet in height) and total cover averaging 30 percent. Community boundaries are abrupt.

Spineless horsebrush and rubber rabbitbrush occur more frequently than they do in Shadscale Scrub. All other local Shadscale Scrub shrubs are minor components or absent from the Big Sagebrush Scrub community. Shrubs found only in Big Sagebrush Scrub include desert peach, greasewood, and Torrey saltbush. Prince's plume, a perennial herb, comprises 5-10 percent of the cover. There are no other perennial herbs in this community except for one small soil inclusion area.

Within the Big Sagebrush Scrub area, one 0.4 acre soil inclusion with a very powdery, white surface was considered important enough to be mapped as a subcommunity. This distinct subcommunity follows the 4620-4640 contour narrowly, although it is interrupted by the spring. Within this area, the diversity and cover of the Big Sagebrush community is retained, but the plants are dwarfed with an average height of less than 1 foot. Species found only in this area include Shockley's

⁵ Nevada dalea (*P. polydenius*) has been described variably as "rare in California" to "locally abundant" (Paulus, p. 8).

⁶ Desert pavement is an even distribution of stony alluvium on the soil surface.

buckwheat (considered to have a limited distribution in California), very sparse saltgrass and Baltic rush, scattered evening primrose, yellow cryptantha, narrow-leaved paintbrush, and small populations of the rare species silver-leaved milkvetch and alkali ivesia. Paulus notes that:

“Given the seasonally moist soil habitats that are occupied by the nearest off-site populations of saltgrass, Baltic rush and alkali ivesia, and in order to provide an explanation for the dwarfed habit of the shrubs, it is postulated that local groundwater (possibly saline) intrudes at least episodically to near the soil surface in this subcommunity area.” (Paulus, p. 9)

RIPARIAN COMMUNITIES

Paulus notes the following concerning the riparian communities found on the project site:

“Occurrences of Modoc-Great Basin Riparian Scrub and Transmontane Freshwater Marsh are isolated and uncommon on the relatively dry fans in the Chalfant/Owens Valley landscape, and these communities occur uncommonly in the Great Basin generally. Two occurrences of Modoc-Great Basin Riparian Scrub totaling 0.6 acres area associated with the fault scarp: A seasonal or possibly ephemeral seep zone located in a gully in the central fault zone supports the smaller of the two occurrences, while a perennial spring and its channel outflow toward the southern property edge supports a denser and larger, narrowly corridor-shaped area of Modoc-Great Basin Riparian Scrub. This latter occurrence includes a small, embedded Transmontane Freshwater Marsh community near the spring source.

Modoc-Great Basin Riparian Scrub within the study area is dominated by leafy shrubs and small trees, giving the community a greener and taller appearance, in contrast to the grey-green crowns of the surrounding upland scrub. The riparian scrub is dominated rather completely by Wood’s interior rose (*Rosa woodsii* var. *ultramontane*), narrowleaf willow (*Salix exigua*), and a lesser arroyo willow (*S. lasiolepis*) component. Understory vegetation is sparse, probably due to the high density of the canopy and a thick accommodation of leaf duff. Total cover is 100 %; the corridor is nearly impassable due to dense willow stems and thorny, thicket-like rose clumps. Average community height is 5 ft. The riparian corridor transitions to upland scrub just beyond the southern property edge, at about the current extent of the spring-fed surface flow.

Transmontane Freshwater Marsh occupies a small area (about 245 ft x 15 ft) at the perennial spring flow source. Surface water is ponded throughout the extent of the marsh, but open water is completely obscured by accumulated vegetation litter. The total cover in Transmontane Freshwater Marsh is 100 %, and average height is 4 ft. The only species occurring within this community are emergent cattail (*Typha* sp.) and goldenrod (*Solidago* sp.). Modoc-Great Basin Riparian Scrub very narrowly surrounds the ponded water on all sides, except where the former channel bottom at the tail of the marsh was recently disturbed (filled) to construct a crude dam. Currently, flowing water from the southern spring is partially impounded by the dam and a portion of the flow is conveyed through a pipe to an off-site location.”

DISTURBED AREAS AND NON-NATIVE SPECIES

Mechanically disturbed areas cover approximately 6.6 acres (9.5 percent of the study area). These areas include:

- Areas disturbed by an historic ore mining operation in the large drainage along the southern property boundary;
- Areas previously used for irrigated agriculture but long abandoned; and

- Recent scrapes associated with the existing water tank and water system construction.

These areas are either devoid of native vegetation or show scrub recovery with <1% to about 5% total cover. The area previously used for irrigated agriculture shows a noticeable shift in perennial dominance to rubber rabbitbrush, suggesting that disturbance in this area could facilitate a long term shift in the plant community (Paulus, p. 10). The 6.6 acres of disturbed area does not include the many trails and dirt roads on-site. Paulus notes that “disturbance, especially OHV-related disturbance, is reducing the area of competent desert pavement remaining on-site”(Paulus, p. 11). There is less disturbance in the area above and east of the scarp, than in the area downslope and west of the scarp.

Several non-native species (bull thistle, yellowspine thistle, jimson weed, and tamarisk) occur only on the mechanically disturbed areas on the site. Russian thistle, an annual non-native species considered a noxious weed, is widespread throughout the study area.

SENSITIVE PLANT COMMUNITIES AND SPECIES

The scrub and riparian plant communities found on-site are not considered sensitive. Single populations of three sensitive plant species were found during the botanical field surveys performed in 2004. Silver-leafed milkvetch (*Astragalus argophyllus* var. *argophyllus*), Shockley’s Buckwheat (*Eriogonum shockleyi*), and Alkali Ivesia (*Ivesia kingii* var. *kingii*) were all found within the dwarfed subcommunity in the Big Sagebrush Scrub community. Other sensitive species identified during the literature search as having the potential to occur in the area were not observed during the field surveys.

The Silver-leafed milkvetch is listed by the California Native Plant Society (CNPS) as “rare, threatened or endangered in California but more common elsewhere” (List 2). Seven plants were found at the edge of a devegetated roadway to the perennial spring. The population on-site is assumed to be the northernmost members of a larger population documented in California Department of Fish and Game (CDFG) literature as occurring in the area in 1988. A quick survey of the larger spring complex to the south of the project site in May, 2004, did not reveal any more individuals of the species. Further study would be necessary to accurately assess the population and whether it is declining.

The Alkali Ivesia is listed by the CNPS as “rare and endangered in California and elsewhere” (List 1B). The population of 23 plants was found in the same area as the silver-leafed milkvetch.

Shockley’s buckwheat is listed by the CNPS as “a plant of limited distribution” (List 4). A total of 260 plants were found over an area of approximately 15,000 square feet, mostly south of the southern spring, but extending to a patch of 5 individuals located just north of the northern spring.

VEGETATION IMPACTS

Shadscale Scrub and Big Sagebrush Scrub are regionally common and widespread vegetation communities throughout the Great Basin and are not considered sensitive vegetation types. The project would result in the conversion of 55.65 acres of desert scrub to housing and roads, assuming that a house is built on the remainder parcel. If a house is not built on the remainder parcel, the project would result in the conversion of 36.42 acres to housing and roads. The remaining acreage will stay undisturbed open space. The Big Sagebrush Scrub will not be disturbed since it is located along the fault scarp in the eastern portion of the parcel and is contiguous to the riparian communities which the project has been designed to avoid.

The conversion of approximately 56 acres of Shadscale Scrub is not expected to create a significant impact on vegetation resources in the area since it is a regionally common and widespread vegetation type in the area and is not considered a sensitive vegetation type.

RIPARIAN COMMUNITIES

Paulus (p. 10) notes the following concerning the riparian communities on-site:

“Riparian communities comprise a small portion of the study area. However, the springs that support them are not isolated. Rather they are the northernmost flows associated with a large fault-controlled spring complex located to the south on City of Los Angeles Department of Water and Power (LADWP) and Bureau of Land Management (BLM) lands outside the study area.....Riparian communities (and the surrounding Big Sagebrush Scrub) within the study area are therefore an ecologically contiguous but legally disjunct part of a relatively unspoiled larger habitat that is being managed in accordance with LADWP land use policy (no current exports of water from the springs in question) and with the Owens Basin Wetland and Aquatic Species Recovery Plan (US Fish and Wildlife Service, 2000).”

Paulus notes that the riparian communities on-site are not considered sensitive by the CDFG (Paulus, p. 11) but that Modoc-Great Basin Riparian Scrub and Transmontane Freshwater Marsh occur infrequently on the relatively dry fans of the Tri-Valley and their occurrence is uncommon in the Great Basin in general. The riparian communities on-site are part of a larger riparian ecosystem and provide important habitat resources for wildlife in the area. The marsh has recently been disturbed by the construction of a crude dam and roads throughout the project site provide easy access to the riparian areas. Development in the area and the associated increase in population could significantly impact the riparian resource.

The springs and marsh area are located on the remainder parcel, a 19.23 acre parcel that allows one single-family residence. The project has been designed to avoid development in the area surrounding the springs and marsh. In addition, mitigation measures proposed in this DEIR (which are incorporated into the Specific Plan as policies and conservation standards) will restrict land use and development on the remainder parcel. Even with development limitations in the area surrounding the spring, the increase in population in the area from the proposed subdivision could significantly impact the riparian resource. Proposed mitigation measures that address potential secondary impacts to the riparian resources will reduce those impacts to a less than significant level.

NOXIOUS WEEDS

The Botanical Report (Paulus, p. 11) identifies four non-native weed species on-site that are rated as noxious weeds:

- Russian thistle is considered a noxious weed and is rated by CalEPPC⁷ as “considered but not listed” and by CDFA⁸ as “C: weeds not subject to eradication by the CDFA”;
- Tamarisk is rated by CalEPPC as “A-1: The most invasive exotic plants, and already widespread”;
- Bull thistle is rated by CalEPPC as “B: Wildland plants of lesser invasiveness”; and

⁷ CalEPPC = California Exotic Pest Plant Council.

⁸ CDFA = California Department of Agriculture.

- Yellowspine thistle is rated by CDFA as “A: Eradication, containment, rejection or other holding action at the state-county level”.

The Botanical Report (Paulus, p. 11) concludes that:

“The risk for further invasiveness by Russian thistle would be increased at this site by any traffic or activity that would further decrease the integrity of the remaining desert pavement surfaces. The risk for tamarisk, bull thistle, and yellowspine thistle invasiveness within the study area would be increased by any water use practices that would enhance or decrease baseline spring flows, or changes in runoff pattern which would cause additional scour within the gullies associated with the fault zone (eg., higher runoff from more upslope impervious surfaces), or which would create disturbed soils in areas where a relatively high groundwater table occurs and the habitat is suitable for phreatophytes⁹.”

The project has been designed to avoid some of the impacts identified above by avoiding impacts to the springs and by avoiding development in areas with high groundwater and in the eastern, upslope portion of the project site. Impacts to vegetation from noxious weeds are anticipated to be less than significant.

SENSITIVE SPECIES

The Botanical Report identifies three sensitive plant species on-site (Silver-Leafed Milkvetch, Shockley’s Buckwheat, and Alkali Ivesia), all of which occur in the Big Sagebrush Scrub habitat. The majority of the identified plants occur within Lot D of the proposed project, a 9.08 acre parcel proposed for open space uses. The remaining plants occur on the remainder parcel, a 19.23 acre parcel that allows one single-family residential construction. Development or traffic within these areas could significantly impact the identified sensitive plant species populations. While the project has been designed to avoid development in the area surrounding the sensitive plant species, the increase in population in the area from the proposed subdivision could significantly impact the sensitive plant species. Land use on those parcels has been restricted in order to avoid development in areas with sensitive species. Mitigation measures proposed in this DEIR (which are incorporated into the Specific Plan as policies and conservation standards) will further reduce potential secondary impacts to the sensitive plant species to a less than significant level.

⁹ Phreatophytes are deep-rooted plants that obtain their water from the water table or the soil just above it.

FIGURE 2
EXISTING VEGETATION COMMUNITIES ON-SITE

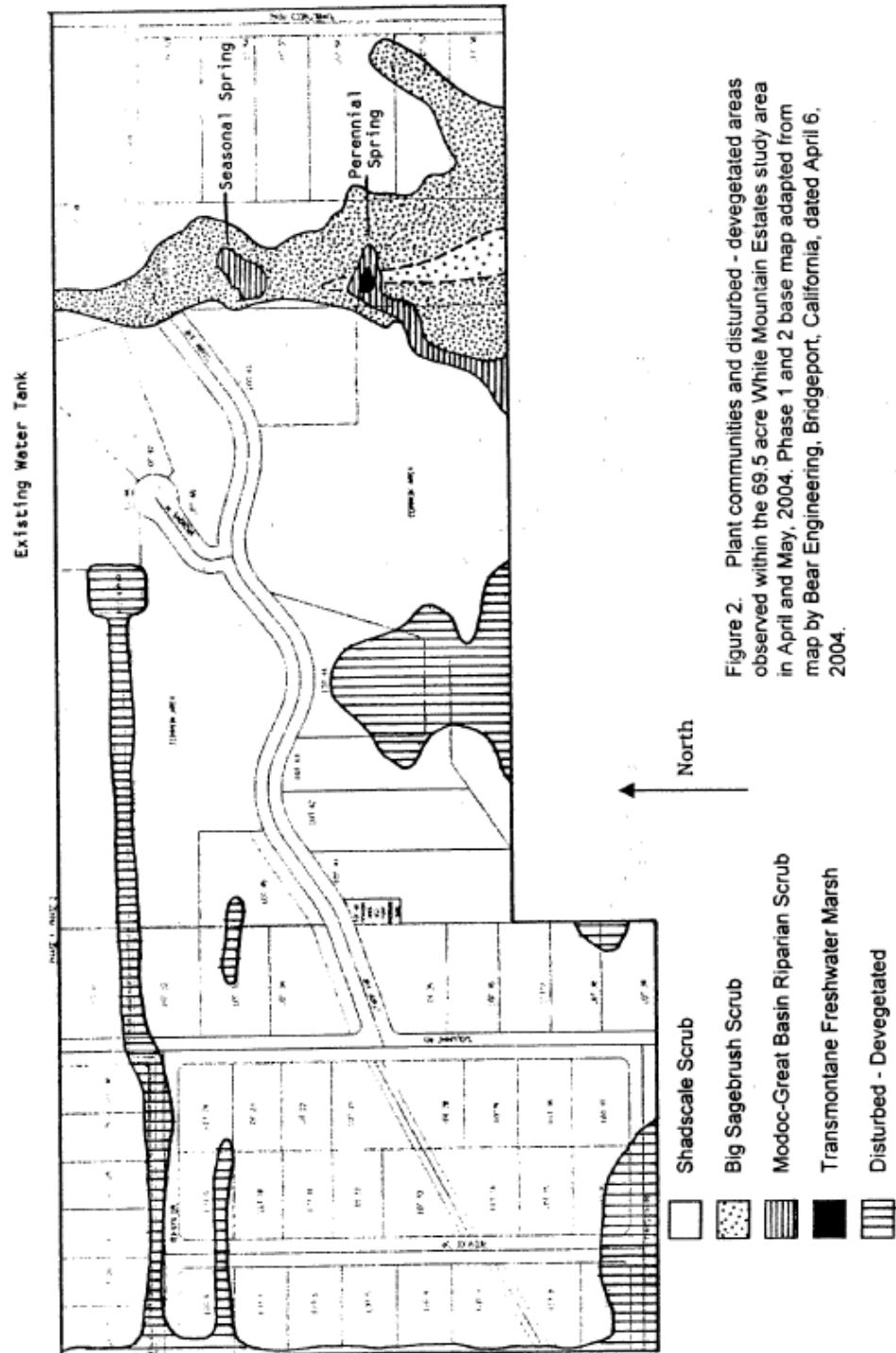


Figure 2. Plant communities and disturbed - devegetated areas observed within the 69.5 acre White Mountain Estates study area in April and May, 2004. Phase 1 and 2 base map adapted from map by Bear Engineering, Bridgeport, California, dated April 6, 2004.

WILDLIFE SETTING

The following information on wildlife is excerpted from the *Wildlife Surveys, White Mountain Estates Parcels*, prepared by JBR Environmental Consultants, Inc., in 2004. The complete text of that report is included in the appendices. The Wildlife Surveys included a literature search for sensitive species, discussions with local DFG staff, and a wildlife assessment conducted on the project site on August 2 and 3, 2004.

Wildlife observed on the parcel during the August surveys included a small number of birds, black-tailed jackrabbits, the tracks of coyotes, and evidence of rodent activity. A number of lizards were also observed. The greatest wildlife diversity was noted in the area of the spring and associated riparian vegetation.

POTENTIAL FOR VARIOUS SPECIES TO OCCUR IN THE AREA

BIG GAME

No evidence of mule deer, antelope, or bighorn sheep was observed during the field surveys. California Natural Diversity Database (CNDDDB) records indicate that desert bighorn sheep occur in the White Mountains within approximately 1.25 miles of the project site.

Tim Taylor, of the California Department of Fish and Game (CDFG), noted that mule deer occur in the area in low numbers and that bighorn sheep have been reported at the base of the White Mountains, primarily during winter.

GAME BIRDS

California quail and mourning doves were observed in the area of the spring. Although Tim Taylor stated that sagebrush habitats on and near the parcel may receive some use by wintering sage-grouse, no evidence of sage-grouse was found, the area of sagebrush on the parcel is limited, and the parcel's potential to support sage grouse appears low.

MIGRATORY BIRDS

A variety of small birds were observed during the field surveys including sage sparrows, loggerhead shrike, house wren, Say's phoebe, and house finch. All of these birds would be expected to nest in the area.

RAPTORS

A single Swainson's hawk was observed flying over trees and other vegetation that appeared to be associated with a spring approximately ¼ mile south of the project site. CNDDDB records indicate Swainson's hawks have been reported nesting within 2.5 miles of the survey area. No raptor nests or large trees were present in the survey area. Turkey vultures were also observed flying over the site during the field surveys.

SMALL GAME AND NON-GAME

Black-tailed jackrabbits were fairly common on the parcel and a few antelope ground squirrels were observed. Two packrat nests and a variety of small rodent burrows were noted. The area could be expected to support kit foxes although none were observed during the surveys.

Reptiles noted on the parcel included Great Basin whiptails, leopard lizards, desert side-blotched lizards, and a single collared lizard.

BATS

JBR used a bat detector to record bat calls over the spring on the project site. Bat calls were recorded automatically beginning at 4:15 on the evening of August 2, 2004, and ending at 5:30 in

the morning on August 3, 2004. The machine recorded 52 bat calls. Analysis of these calls indicated that the majority of bats foraging over the spring (49 of the 52 calls) were western pipistrelles. Two Mexican free-tailed bat calls and a single fringed myotis call were also recorded. Of the bats identified, only the fringed myotis is considered sensitive. There appears to be no suitable bat roosting habitat on the site. The Wildlife Surveys concludes that most bats in the area probably roost in the White Mountains and forage in the survey area.

SENSITIVE WILDLIFE SPECIES

CNDDDB records indicate that several sensitive species may occur in the project area, including the Owens valley springsnail, Swainson's hawk, western sage grouse, and fringed myotis bat.

The Owens valley springsnail has been reported from the spring on the property in the past (CNDDDB records). These snails often occur in association with watercress or other aquatic vegetation in flowing water. The spring is surrounded by dense vegetation, including cattails, sandbar willow and wild rose. Wetted roots and stalks of cattails, as well as wetted debris, were searched for springsnails and none were found.

Swainson's hawk is a state threatened species, whose status in 1999 was declining. Very limited breeding is reported in the Owens Valley. They typically nest in open riparian habitat, scattered trees or small groves in sparsely vegetated flatlands. Their diet is varied, including small mammals, amphibians, reptiles, birds, insects, and bats. Swainson's hawks require large, open grasslands with abundant prey in association with suitable nest sites. Their typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Suitable foraging areas include native grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row crops. Their territory size has been estimated to average 1.6 square miles, although home ranges have been measured from 0.3 square miles to 2.1 square miles (www.dfg.ca.gov/whdab/html/B121.html). The site may provide foraging habitat for Swainson's hawks but does not provide roosting habitat.

No sage-grouse pellets were observed on the site during the field surveys. The amount of sagebrush present is limited (approximately 4.82 acres within the approximately 73 acre survey site) and the area appears to represent low potential for sage-grouse habitat.

The fringed myotis bat is listed as sensitive by the BLM, a listing for species that are 1) under status review by the USFWS/NMFS; or 2) whose numbers are declining so rapidly that Federal listing may become necessary; or 3) with typically small and widely dispersed populations; or 4) those inhabiting ecological refugia or other specialized or unique habitats. The BLM provides sensitive species with the same level of protection as federal candidate species.

The CNDDDB identifies the fringed myotis as G4G5S4, indicating that it is apparently secure; some factors may exist to cause some concern such as narrow habitat or continuing threats; or demonstrably secure, commonly found throughout its historic range.

The Western Bat Working Group identifies the fringed myotis as high priority, designating the species as imperiled or at high risk of imperilment based on available information on distribution, status, ecology, and known threats.

WILDLIFE IMPACTS

The project site is adjacent to existing development and a portion of it has been used in the past for agriculture and mining. Vegetation on the majority of the site is sparse and low-growing and does

not provide suitable cover or forage for many species other than small birds and mammals commonly associated with xeric (dry) scrub communities.

The vegetation communities on-site, Shadscale Scrub and Big Sagebrush Scrub, are regionally common and widespread vegetation communities throughout the Great Basin and are not considered sensitive vegetation types. The project would result in the conversion of 55.65 acres of desert scrub to housing and roads, assuming that a house is built on the remainder parcel. If a house is not built on the remainder parcel, the project would result in the conversion of 36.42 acres to housing and roads. The remaining acreage will stay undisturbed open space. There is sufficient adjacent habitat available in the project vicinity so that there will not be a significant impact to wildlife from the loss of that habitat.

RIPARIAN AREAS

The project site does include two springs and a corridor of riparian vegetation. The spring provides an important water resource for wildlife and a foraging area for bats. It is also reported to provide potential habitat for the Owens valley spring snail. Since water resources in the area are limited this spring is important. After the residential development, wildlife will continue to utilize the spring and there will be an increased potential for long-term conflicts between humans and wildlife. The potential for hydrologic drawdown and/or direct surface disturbances to the springs and riparian areas may result in a direct impact to wildlife.

The proposed development could result in significant impacts to the spring and riparian system on-site and associated significant impacts to wildlife, primarily from increased human use of the area. Proposed mitigation measures in this DEIR to protect the springs will reduce those potential impacts to less than significant levels.

The Wildlife Survey also notes that the area represents potential nesting habitat for migratory birds and vegetation clearing during the avian breeding season (early May through late July) could potentially impact nests, eggs, and young birds. The Wildlife Survey suggests a mitigation measure to avoid those impacts.

CONCLUSION

Development in the area could result in potentially significant impacts to sensitive plant and animal species, however, the project has been designed to avoid impacts to the areas with identified sensitive plant and animal species. In addition, required mitigation measures will reduce potential impacts to less than significant levels. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies.

VEGETATION AND WILDLIFE MITIGATION

The following proposed mitigation measures mitigate the environmental impact(s) identified in the previous section:

- VW-1 Land uses on Lot D shall be limited to non-motorized passive recreational activities (e.g. hiking, birdwatching, wildlife viewing, horseback riding) and signs shall be posted at the entrances to the parcel reiterating the prohibition on motorized vehicles (White Mountain Estates Specific Plan Conservation Standard CS-23).
- VW-2 If development occurs on the remainder parcel beyond one residential unit with one mutual water company connection, the Planning Commission may determine that the spring should be monitored on an annual basis, for a period of 10 years, to determine if development is affecting the spring. Monitoring of the spring shall be performed by a qualified biologist during the spring and paid for by the property owner. Should it be

- determined that development is affecting the spring, appropriate mitigation shall be imposed by Mono County, in coordination with CDFG. (White Mountain Estates Specific Plan Conservation Standard CS-24).
- VW-3 If vegetation clearing is required during the avian breeding season, a qualified biologist, paid for by the developer, shall survey the area affected and if active nests are located, a protective buffer of 100 feet shall be established around the nests to be avoided until the young have fledged (White Mountain Estates Specific Plan Conservation Standard CS-25).
- VW-4 Building envelopes and driveways shall be established on the Final Phased Tract Map for all lots in order to reduce site disturbance and associated dust, to avoid fault hazards, to protect vegetation and wildlife, to minimize flood and drainage impacts, and to establish that there is sufficient room for leach fields and replacement fields. The land use plan shall also indicate lots where Secondary Units may be allowed. On lots larger than one acre in size, where large animals such as horses or llamas are allowed, animal confinement areas shall also be established on the Final Phased Tract Map in order to reduce site disturbance, protect vegetation, and to ensure that there is sufficient area for the leach field, replacement field, and animal areas (White Mountain Estates Specific Plan Conservation Standard CS-9).
- VW-5 Domestic animals shall be restrained at all times, either through the use of leashes or private fenced yards. No animals shall be allowed to be free roaming. This requirement shall be reiterated in the project CC & Rs (White Mountain Estates Specific Plan Conservation Standard CS-20).
- VW-6 Dogs on the project site during construction must be under the direct control of the owner at all times (White Mountain Estates Specific Plan Conservation Standard CS-21).
- VW-7 Construction shall be limited to daylight hours in accordance with the Mono County Noise Regulations (Mono County Code Section 10.16) in order to minimize impacts to nocturnal wildlife species and adjacent sensitive noise receptors (White Mountain Estates Specific Plan Conservation Standard CS-22).
- VW-8 During construction, project boundaries shall be clearly delineated in order to avoid disturbances to surrounding off-site vegetation and soils (White Mountain Estates Specific Plan Conservation Standard CS-26).
- VW-9 The project proponent shall revegetate disturbed areas resulting from roadway construction and infrastructure installation. Revegetation shall utilize local seed mixes and/or native plants and shall be conducted immediately following construction. Revegetated areas shall be irrigated as needed and maintained until the plants are established (White Mountain Estates Specific Plan Conservation Standard CS-27).
- VW-10 To deter the spread of weeds, stockpiled topsoil shall be covered and disturbed areas shall be revegetated immediately following construction (White Mountain Estates Specific Plan Conservation CS-28).
- VW-11 The project proponent shall work with LADWP and BLM to identify authorized trail/route access from the community across adjacent LADWP and BLM lands. The route(s) shall be identified prior to approval of the final tract map and shall be marked with signs at the property boundary. The CC & Rs for the project shall inform all residents of BLM policies that prohibit cross-country vehicle use on adjacent public lands and limit that vehicle use to designated roads and trails (White Mountain Estates Specific Plan Conservation CS-30).

VEGETATION AND WILDLIFE MITIGATION MONITORING

See the mitigation monitoring plan.

VISUAL RESOURCES

VISUAL RESOURCE SETTING

Visually, the Tri-Valley is very open, with sweeping vistas of the surrounding mountains. Development and agricultural uses are highly visible since the floor of the valley is relatively flat and there is limited screening vegetation. The existing White Mountain Estates development appears as a discrete area of development within a surrounding larger area of undeveloped sagebrush/desert scrub. It is located approximately one mile south of the community of Chalfant and is a visually distinct area of development, separated from Chalfant by undeveloped open space and agricultural lands. The development is predominantly one-story detached single-family residential development with mature landscaping. Colors and materials of the structures tend to blend into the surrounding environment. Figures 3 and 4 show existing visual resources on the project site.

The Bureau of Land Management (BLM) establishes Visual Resource Management (VRM) classes for the public lands it manages in the area (MEA Figure 12 L/M). BLM lands to the east of Highway 6, along the base of the White Mountains, are identified as VRM II, High, which means that "Visual contrast is permitted; management activity is seen, but it must not attract attention. Changes in any of the basic elements (form, line, color, texture) caused by the activity must not be visible in the characteristic landscape" (MEA, p. 114). The open space lands surrounding the project site are owned by the Los Angeles Department of Water and Power (LADWP) and do not have any visual resource designation.

Highway 6 does not have a scenic highway designation. There are 60-110 kV transmission lines that run roughly parallel to Highway 6 on the west side of the highway, from Bishop to Chalfant. Large transmission lines (>110 kV lines) run along the west edge of the valley from Bishop to south of Hammill where they shift to the northwest. Outdoor lighting and streetlights are minimal in Chalfant and in the White Mountain Estates development.

VISUAL RESOURCE IMPACTS

The White Mountain Estates development is located on the alluvial fan of the White Mountains, slightly elevated above the floor of the Tri-Valley. Since the area is relatively open, with little vegetation, any development tends to be visible from a distance. Design and conservation standards in the Specific Plan will mitigate visual resource impacts to the lowest feasible level by ensuring that the built components of the project blend into the surrounding environment as much as possible and that visually offensive uses such as propane tanks are visually screened through the use of landscaping, fencing, berms or other screening. Development is discouraged on ridgetops and ridgelines and cut and fill must be minimized. Housing types, colors, and materials will be similar to existing development at the existing White Mountain Estates and will not create a significant visual impact.

Design standards for the project also limit streetlights in the project to major access points into the project and require all outside lighting to be shielded and directed so it does not go beyond the boundaries of the lot. Lighting will be similar to, and adjacent to, existing lighting in the community and will not create a significant visual impact.

Key viewsheds in the area include views from the north- and south-bound lanes of Highway 6 and from the existing community looking east towards the new development. Figures 3 and 4 show the

existing project site from north and south on Highway 6 and visual simulations of the proposed development from the same locations.

The proposed development will appear as an extension of the existing development at White Mountain Estates and will not create a significant impact to the existing long-range view of the area. Short-range views to the east from the existing development will be altered but the overall panoramic views of the White Mountains will not be significantly affected.

FIGURE 3

**EXISTING SITE & PROPOSED DEVELOPMENT LOOKING SOUTHEAST
FROM HIGHWAY 6**



FIGURE 4

**EXISTING SITE & PROPOSED DEVELOPMENT LOOKING NORTHEAST
FROM HIGHWAY 6**



CONCLUSION

Potentially significant unavoidable impacts will not be present with regard to Visual Resources; required mitigation measures will reduce potential impacts to less than significant levels. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies.

VISUAL RESOURCE MITIGATION

The following proposed mitigation measures mitigate the environmental impact(s) identified in the previous section:

- VR-1 The project shall not have streetlights unless required for safety at intersections. Streetlights shall be shielded and directed so that no light emanates beyond the street (White Mountain Estates Specific Plan Design Standard DS-7).
- VR-2 Exterior lighting at individual residences shall be limited to that necessary for safety reasons. Exterior lighting shall be concealed, high intensity lighting shall be avoided, and lighting shall be shielded and directed so that it does not emanate beyond the boundaries of each individual lot. This requirement shall be reiterated in the CC & Rs for the project (White Mountain Estates Specific Plan Design Standard DS-8).
- VR-3 The scale and design of structures, fences and signs shall harmonize with existing development in the area and with the surrounding natural environment (White Mountains Estates Design Standard DS-11).
- VR-4 Building heights for residential development shall be limited to a maximum of 35 feet from any given point above grade. All heights shall be calculated from the natural grade or finished grade, whichever is more restrictive. This requirement shall be reiterated in the CC & Rs for the project (White Mountain Estates Specific Plan Design Standard DS-12).
- VR-5 In compliance with Mono County's minimum development standards, the color, design, and type of building materials for structures, fences, and signs shall be aesthetically compatible with the natural environment and/or surrounding community. Reflective materials shall not be allowed. Colors shall be muted earth tones, i.e. dark tans, browns, grays, or greens. Roof colors shall be muted, non-reflective dark earth tones, i.e. brown, green. Building materials shall have an appearance compatible with the surrounding environment, e.g. wood, stone, or stucco. This requirement shall be reiterated in the CC & Rs for the project (White Mountain Estates Specific Plan Design Standard DS-13).
- VR-6 The project shall comply with the provisions of the Mono County Sign Ordinance, Chapter 7 of the Land Development Regulations, specifically with Section 07.020 (D), Real Estate Signs (White Mountain Estates Specific Plan Design Standard DS-14).
- VR-7 All utilities (electrical, communication lines, water distribution lines, propane distribution lines, etc.) shall be installed underground in conformance with applicable provisions of the Mono County Land Development Regulations. All service connections shall be placed so that public roadways will not have to be cut up for service connections to future residences (White Mountain Estates Specific Plan Design Standard DS-16).
- VR-8 Mailboxes shall be clustered and shall be installed by White Mountain Estates LLC at a location approved by the Public Works Department and the US Postal Service. Prior to approval of the Final Tract Map, the applicant shall provide a letter from the US Postal Service and the Mono County Department of Public Works stating their approval of road names and cluster box locations for the development. The location of the mailboxes shall be shown on the Final Tract Map. The mailboxes shall be painted a muted dark earth tone (i.e. tan, green, brown, gray) that blends in with the surrounding environment and is non-reflective (Mountain Vistas Specific Plan Design Standard DS-18).
- VR-9 In compliance with Mono County's minimum development standards, visually offensive land uses such as the production well, water storage tank, and propane tank(s) shall be adequately screened through the use of landscaping, fencing, contour grading, or other appropriate measures, including the use of an appropriate paint color and finish that blends into the surrounding visual environment. Paint color and finish shall be approved by the Planning Director. Landscaping shall occur as shown on the Master Landscape Plan in Appendix A, Map Set (White Mountain Estates Specific Plan Design Standard DS-19).
- VR-10 Building envelopes for each residential parcel shall be located to avoid development on ridgelines or ridgetops, when feasible, and to minimize cut and fill (White Mountain Estates Specific Plan Conservation Standard CS-10).

- VR-11 In order to minimize the potential for dust erosion and visual impacts, land disturbance (grading, cut and fill) for road construction, infrastructure installation, and building construction shall be limited to the areas identified on the Final Tract Map for roads, utilities, building envelopes, and driveways (White Mountain Estates Specific Plan Conservation Standard CS-11).
- VR-12 Landscaping shall be utilized to minimize potential visual impacts resulting from development and to minimize erosion. Landscaping on individual residential lots shall be predominantly xeriscape (i.e. 65 percent of landscaping on an individual lot shall be xeriscape) and fire safe. The requirement for xeriscapic and fire safe landscaping shall be reiterated in the CC & Rs for the project. See DS-21 for specific provisions regarding xeriscape and fire safe landscaping (White Mountain Estates Specific Plan Conservation Standard CS-29).

VISUAL RESOURCE MITIGATION MONITORING

See the mitigation monitoring plan.

CULTURAL RESOURCES

CULTURAL RESOURCE SETTING

The following information on cultural resources on the project site is summarized from *An Archaeological Survey of the Proposed White Mountain Estates Subdivision II* completed by Jeffrey F. Burton in 2004. The complete text of that report is included in the appendices. Background research was conducted through the Eastern Information Center of the California Historical Resources Inventory System (CHRIS). Their records indicate no surveys or sites recorded within one half mile of the project site. Historic and pre-historic sites have been recorded at Piute Creek, one mile to the north, and at Coldwater Canyon, one mile to the south.

Archaeological field work, totaling four person-days, was conducted on July 26 and 31, 2004. The survey area was walked at 30 meter intervals along north-south compass bearings. Following the initial survey, discovered sites were returned to and recorded, which included completion of site records based on the California Historical Resource Inventory System.

Burton provides the following cultural chronology for the region:

“Mohave complex (pre-3500 B.C.)—indicated by Mohave, Silver Lake, and Great Basin Transverse projectile point assemblages.

Little Lake Period (3500 to 1200 B.C.)—indicated by Little Lake and Pinto series projectile points and Humboldt Concave-base bifaces.

Newberry Period (1200 B.C. to A.D. 600)—indicated by Elko series projectile points.

Haiwee Period (A.D. 600 to 1300)—indicated by Eastgate and Rose Spring series (“Eastgate”) projectile points and Humboldt Basal-notched bifaces.

Marana Period (A.D. 1300 to historic)—indicated by Cottonwood and Desert Side-notched projectile points and Owens Valley Brown Ware ceramics.

Mohave complex and earlier sites are limited to two sites in Long Valley, a few sites at Mono Lake and Owens Lake, and isolated points found in surface contexts. The Little Lake period is characterized by high mobility; free-ranging groups maintained base camps near riparian areas and made frequent use of temporary camps. Sites dating to this period are generally sparse, with a narrow artifact assemblage consistent with use by highly mobile groups. Structures and associated artifacts at Newberry period sites suggest use as seasonal base camps or temporary hunting camps. Flaked stone tool types became standardized and ground stone artifacts became formalized and diverse. Haiwee period sites are dominated by casual flaked stone tools and shaped ground stone artifacts. There appears to be increasing settlement centralization during the Haiwee period, and a shift towards intensive land use focused on increased use of small animals and plants. The trend towards intensifying land use continued in the Marana period, with some villages occupied essentially year-round. Also during the Marana period there is a greater shift to expedient technologies with the introduction of casual ground stone types.”

Burton also notes that the project area lies within the Piute Mining District, established in 1873, which included the west slope of the White Mountains from Birch Creek to the north to Silver Creek Canyon to the south. One of the major mines of the district was the Southern Belle Mining Group, located a mile and a half to the southeast of the project area.”

The field surveys located six historic sites, one dual-component prehistoric-historic artifact scatter, and five isolates in the project area. All of the historic sites (one homesite, one millsite, a ditch, and four trash dumps) are likely related to the post-WWII tungsten boom and probably represent the same occupation (Burton, p. 7). The site with prehistoric and historic items contains primarily casual trash from a relatively recent period and a mix of obsidian flakes. The five isolates include 2 groups of more recent trash and 3 obsidian fragments/flakes.

CULTURAL RESOURCE IMPACTS

Burton concludes that:

“The only important archaeological resource that could be affected by the proposed project is the prehistoric component of WME-6. Avoidance of important archaeological sites is the preferred treatment recommended in Appendix K of the California Environmental Quality Act (CEQA). Because WME-6 is located in a drainage near a seep, avoidance and protection may be most feasible, because the site area is not a likely building area.”

The project has been designed to avoid development in the area surrounding the spring and seep. The project will not have a significant impact on Cultural Resources.

CONCLUSION

The project is not anticipated to result in significant impacts to Cultural Resources; one mitigation measure is suggested to further reduce potential impacts. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies.

CULTURAL RESOURCE MITIGATION

The following proposed mitigation measures mitigate potential environmental impact(s) to cultural resources:

- CR-1 The project proponent shall stop work and notify appropriate agencies and officials if archaeological evidence is encountered during earthwork activities. No disturbance of an archaeological site shall be permitted until such time as the applicant hires a qualified consultant and an appropriate report that identifies acceptable site mitigation measures is

filed with the County Planning Department. Road construction/grading plans shall include such notice (White Mountain Estates Specific Plan Conservation Standard CS-31).

CULTURAL RESOURCE MITIGATION MONITORING

See the mitigation monitoring plan.

CIRCULATION

The information in this section is taken from the **Traffic/Circulation Analysis: White Mountain Estates/White Mountain Estates Projects, Mono County** prepared by LSA Associates, Inc. and from various Caltrans planning documents (www.dot.ca.gov). The complete **Traffic/Circulation Analysis** is included in Appendix B.

U. S. HIGHWAY 6

Highway 6 is the primary regional roadway in the project vicinity. Highway 6 is a two-lane conventional highway with a functional description of Minor Arterial (Caltrans, District 9, Route Concept Report--Highway 6). The travel way is 24 feet wide for the entire length of Highway 6 with approximately 4-foot wide shoulders. Caltrans has identified Highway 6 as a component of the Interregional Road System (IRRS) and as a Major Connector in the Strategic Highway Network (STRAHNET), indicating that the route is important for the transportation of people and goods.

The Eastern Sierra Bicycle Guide (www.dot.ca.gov) describes Highway 6 from Bishop to the Nevada State Line as a 2-lane narrow shoulder highway with gentle gradients, light traffic during the day, and mostly trucks at night. Annual Average Daily Traffic (AADT) traffic figures for Highway 6 are shown in Table 4; AADT figures for trucks on Highway 6 are shown in Table 5. In 2003, the most recent year for which traffic counts are available, AADT volumes on Highway 6 in the Chalfant area were 1,250 vehicles per day; 288 (23 percent) of those vehicles were trucks. Of the truck traffic, 204 trucks (71 percent) were large trucks with 5 or more axles.

WHITE MOUNTAIN ESTATES ROAD

White Mountain Estates Road is a two-lane paved county road with a 60-foot right-of-way and a 23 foot paved travel way in the vicinity of the project site. It meets Highway 6 at a three-way intersection, with a stop sign on White Mountain Estates Road.

MONO COUNTY CIRCULATION ELEMENT & REGIONAL TRANSPORTATION PLAN

The Mono County Circulation Element and the Regional Transportation Plan (RTP) identify the following transportation and circulation needs in the Tri-Valley:

Tri-Valley (Benton, Hammil, Chalfant)

Residents are interested in safety and access to the rest of the County. Issues in this area include the provision of adequate and safe access to Highway 6 with sufficient distances between access points; safety along Highway 6 during hazardous conditions (primarily dust storms); the provision of rest stops along Highway 6; the inclusion of Highway 6 into the County-wide scenic highway system for its historic significance; and the provision of a bike path connecting Bishop and Chalfant, either by widening the shoulders along Highway 6 or by providing an alternative route along the abandoned railway lines east of Highway 6. Residents also believe that there is a need for an emergency services facility and an emergency landing strip in Hammil.

The Circulation Element and the RTP contain the following transportation related goal and policies for the Tri-Valley:

GOAL

Provide a safe and convenient transportation system in the Tri-Valley.

- | | |
|--------------------|--|
| Policy 1: | Ensure the safety of the transportation and circulation system in the Tri-Valley. |
| <i>Action 1.1:</i> | Work with Caltrans and the California Highway Patrol to minimize the hazards associated with dust blowing across Highway 6. |
| <i>Action 1.2:</i> | Work with Caltrans and the Tri-Valley communities to address highway improvement, safety issues, mainstreet, and development related planning issues. |
| <i>Action 1.3:</i> | Coordinate new development with the White Mountain Fire Protection District and the Chalfant Community Service District to ensure adequate emergency access. |
| <i>Action 1.4:</i> | Designate a site for a landing strip in Hammil for agricultural and emergency use. |
| Policy 2: | Provide a bike route from the Inyo/Mono County line to the intersection of Highway 6 and State Route 120 in Benton. |
| <i>Action 2.1:</i> | Consider widening the shoulder along Highway 6 as part of future road improvements. |
| <i>Action 2.2:</i> | Investigate the feasibility of establishing a bike trail along the abandoned railway right-of-way east of Highway 6 in Mono County. |
| Policy 3: | Consider designating a bike route from Chalfant to Fish Slough. |
| Policy 4: | Study the feasibility of providing rest stops or turnouts along Highway 6 throughout the Tri-Valley area. |
| Policy 5: | Consider designating Highway 6 as a scenic highway/byway. |
| <i>Action 5.1:</i> | Amend the Mono County General Plan's scenic highway system to include Highway 6, if supported by Tri-Valley residents. |

CALTRANS IMPROVEMENT PLANS IN THE CHALFANT AREA

Caltrans and the Mono County Local Transportation Commission (LTC) have entered into a Capital Project Charter (Chalfant Safety Improvements) to address traffic speeds and turning conflicts that cause safety concerns in the Chalfant area. Highway 6 is a 60 mph two-lane state highway without turn pockets in a developing community area; the Chalfant Safety Improvements project is intended to provide highway improvements to reduce turning conflicts in the community of Chalfant. Caltrans has indicated in the past that residential development should require coordination and the potential phasing of improvements with developer's funding to mitigate the impact of development. The LTC and Caltrans are also in the process of developing a Corridor Plan for the Chalfant Valley that will address safety and future improvements along Highway 6 throughout the Chalfant Valley.

PEDESTRIAN AND BICYCLE FACILITIES

There are currently no pedestrian or bicycle facilities in Chalfant, other than four foot shoulders on Highway 6.

Table 4 Annual Average Daily Traffic, Route 6, Mono County

	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
Mono County Line	-----	-----	-----	140	1,550	1,250
Benton Station 120(W)	140	1,550	1,250	100	1,100	930
Source: Caltrans AADT figures for 2003, www.dot.ca.gov						

Note: “Back” refers to southbound traffic from the noted intersection; “ahead” refers to northbound traffic from the same intersection.

Table 5 Annual Average Daily Truck Traffic, Route 6, Mono County

	Vehicle AADT Total	Truck AADT Total	Trucks as % of Total Vehicles	Truck AADT Total By Axle			
				2	3	4	5+
Benton Station 120(W) northbound traffic	930	223	24	54/24%	16/7%	2/1%	152/68%
Benton Station 120(W) southbound traffic	1,250	288	23	66/23%	14/5%	3/1%	204/71%
Source: Caltrans AADT figures for trucks for 2003, www.dot.ca.gov							

TRANSIT

Inyo-Mono Transit provides transit service from Benton to Bishop on Tuesdays and Fridays. The bus stops at the Chalfant Mercantile in the morning and on the return trip in the afternoon. Eastern Sierra Unified School District provides school bus service for students in the area.

CIRCULATION IMPACTS – TRAFFIC VOLUMES

In the traffic analysis prepared for the project, LSA Associates Inc. estimated short-range (2009) and long-range (2025) traffic volumes through the application of a growth rate to existing traffic volumes. A three percent annual growth rate, compounded for 5 years (short-range) and 21 years (long-range), was applied to existing through volumes along Highway 6 to forecast future volumes.

LSA developed trip generation rates for the project based on traffic counts collected at the intersection of Highway 6 and Chalfant Road. Existing annual average daily traffic (AADT) volumes along Highway 6 were taken from the most recent Caltrans traffic counts. LSA Associates also had existing a.m. and p.m. peak hour turn movement volumes collected at Highway 6 and Chalfant Road and at Highway 6 and Brown Subdivision Road. The counts at Highway 6 and Chalfant Road were utilized for the project impact assessment as well as to establish a trip rate for existing and planned residential uses.

LSA's methodology in developing trip generation rates is discussed in the following excerpt from the **Traffic/Circulation Analysis** prepared for the project (note that the **Traffic/Circulation Analysis** was prepared for the Mountain Vistas project, here referred to as the Brown property, and for the White Mountain Estates or the Estates project).

LSA reviewed sources for standard residential and retail trip rates, such as the Institute of Transportation Engineers (ITE), Trip Generation, Seventh Edition. The standard residential trip rate structure of 10.00 trips per day per unit and associated peak-hour rates are based on surveys of urban and suburban areas that have more robust land development to provide the attractions sought by residents (i.e., shopping, leisure, entertainment). Instead of using these standard trip rates, and overestimating the potential trip making of the Bown and the Estates projects, LSA collected traffic counts at Highway 6/Chalfant Road and developed trip rates based on the existing 41 residential units in the area [*i.e. in West Chalfant*]. Based on the peak-hour traffic counts in and out of Chalfant Road at Highway 6 (illustrated in Figure 4), peak-hour rates included in Table A were developed. The peak-hour residential rates are roughly 65 percent of the standard residential trip rates included in the ITE source. The daily residential rate is estimated based on a 10 to 1 factor of daily to p.m. peak-hour trip making for single-family units. (LSA Associates, Inc., Traffic/Circulation Analysis, p. 2)

Figure 4 and Table A from the Traffic/Circulation Analysis, which are referred to in the above excerpts, are included on the following pages as Figure 5 and Table 6 in this document.

Figure 5
White Mountain Estates AM/PM Peak Hour Traffic Volumes

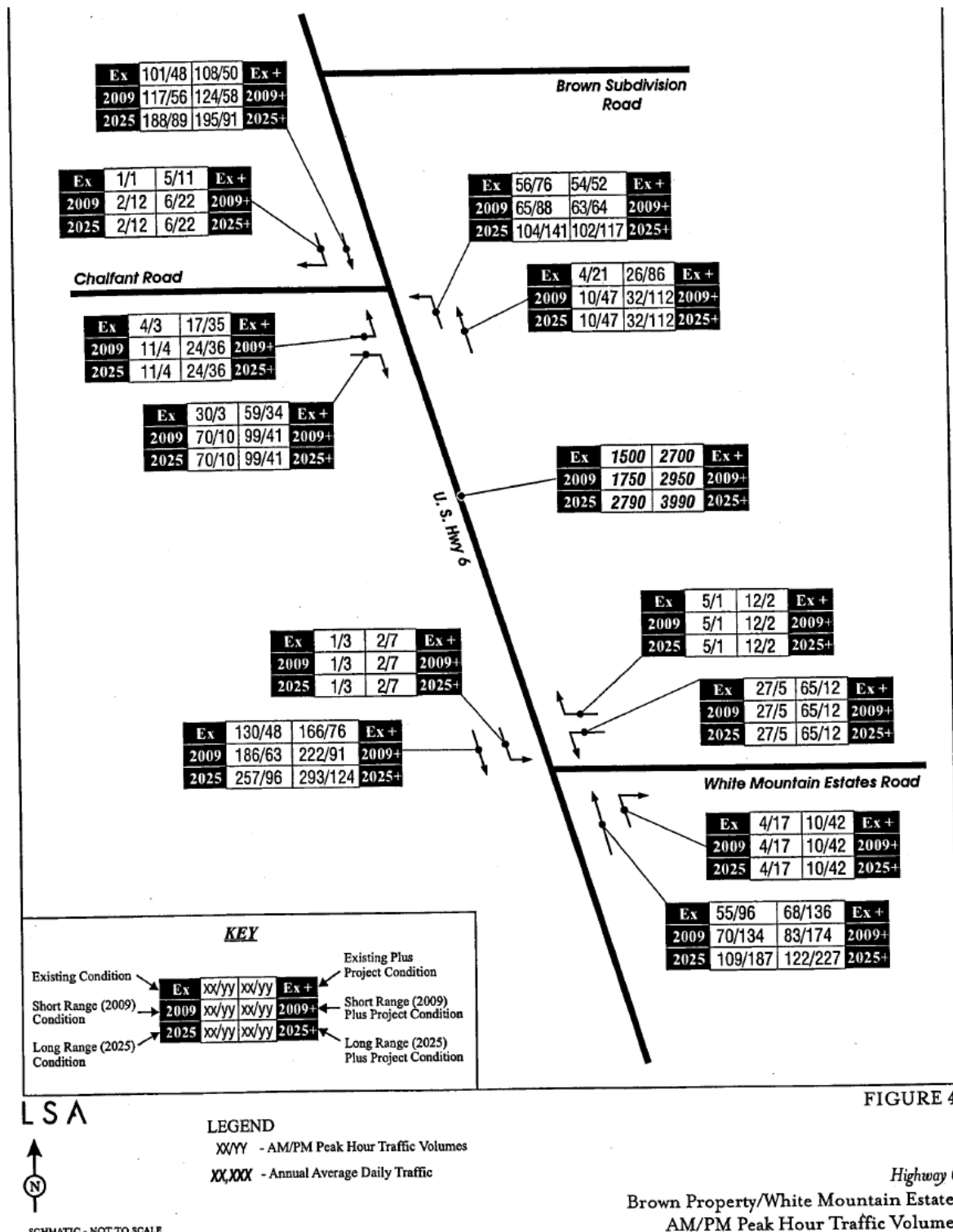


Table 6

White Mountain Estates Trip Generation Summary

Table A - Brown Property/White Mountain Estates Trip Generation Summary

Land Use	Size	Units	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
<i>Trip Rates</i>									
Low Density Residential ¹		DU	6.50	0.12	0.79	0.91	0.51	0.14	0.65
Neighborhood Commercial ²		TSF	87.84	1.36	0.87	2.24	3.81	4.13	7.94
<i>Trip Generation</i>									
Low Density Residential									
Brown Property	48	DU	312	6	38	44	24	7	31
White Mountain Estates	57	DU	371	7	45	52	29	8	37
Neighborhood Commercial	14	TSF	1,230	19	12	31	53	58	111
Pass-By Percentage (55%) ³			676	11	7	17	29	32	61
Net New Trips			553	9	5	14	24	26	50

¹ Peak hour directional trip rates based on surveys at Highway 6/Chalfant Road. Daily rate is 10 times the p.m. peak hour rate.

² Rates are based on 65 percent of ITE Shopping Center rate for 14,000 square foot use.

³ Pass by percentage is from the ITE *Trip Generation Handbook*, 5th Ed., page 62. It is the average of the sample of sites less than 50,000 sq. ft.

Project trips were assigned to local intersections and Highway 6 based on a trip distribution reflecting 85 percent origin/destination to the south and 15 percent origin/destination to the north. These directional splits were derived from the traffic counts collected at Highway 6/Chalfant Road.

Levels of service (LOS) were determined for existing, short-range (2009), and long-range (2025) scenarios with and without the project. Without the project, the level of service for Highway 6/White Mountain Road will remain at LOS A until 2025 when it will be LOS B. With the project, the LOS for that intersection will become LOS B for all time periods through the long-range planning period except for the existing PM period when it will be LOS A.

The Traffic/Circulation Analysis concludes that the Highway 6/White Mountain Estates Road intersection “will operate at excellent levels of service in all horizons without and with the project” (LSA Associates, Inc., p. 3) and that the project will not result in impacts related to traffic volume, congestion, or level of service.

CIRCULATION IMPACTS – TURN LANE GEOMETRICS

While levels of service are forecast to remain good with the development of the project, operational and geometric issues were evaluated by LSA given the existing setting and traffic characteristics. Highway 6 is a truck route, with approximately 23 percent of all vehicles traveling on the route being trucks. The roadway is flat with few lateral obstructions to slow traffic; as a result, traffic, including the trucks, moves at high speed along Highway 6. Caltrans and the Mono County Local Transportation Commission recognize the safety issues associated with turning conflicts in the Chalfant area and have entered into a Capital Project Charter (Chalfant Safety Improvements) to address those concerns.

The development of the project will increase the demand for turn movements along Highway 6 in Chalfant. At the White Mountain Estates Road intersection with Highway 6 the project will increase the north-bound right-turn demand by 25 vehicles per hour in the p.m. peak hour. The increase in turn volume has the potential to increase safety concerns at that intersection.

The Traffic/Circulation Analysis concluded that “to address turn volume increases and potential safety concerns, turn lane channelization is recommended prior to the use and occupancy of the White Mountain Estates project” (LSA Associates, Inc., p. 4). LSA suggests that the White Mountain Estates project should install a northbound right-turn lane on Highway 6 with a 250-foot turn pocket length and a 120-bay taper. No other transitions on Highway 6 appear to be required as a result of the project.

CIRCULATION IMPACTS – PEDESTRIAN & BICYCLE

There are currently no pedestrian or bicycle facilities in Chalfant. Policies in the Mono County Circulation Element and the Regional Transportation Plan (RTP) promote the development of additional facilities throughout the county for non-motorized means of transportation. Applicable goals, objectives and policies from the Circulation Element and RTP are listed below:

- | | |
|-----------------------|--|
| GOAL I | Provide for the use of non-motorized means of transportation within Mono County. |
| POLICY 1: | Develop and implement multimodal transportation plans for all community areas to provide for the development of well-coordinated and designed non-motorized and motorized transportation facilities. |
| Objective 1.2: | Develop multimodal plans for the Antelope Valley, Bridgeport, Crowley Lake, Wheeler Crest, and Tri-Valley and implement those plans once they are adopted. |

- POLICY 2:** Seek opportunities for Federal, State, County, Town, and private participation, when appropriate, in the construction and maintenance of non-motorized facilities.
- Objective 2.1:** Seek partnership opportunities for the following projects:
 Countywide bicycle trail development
 Pedestrian improvements in community areas
 Transportation options to Bodie State Historic Park
 Other non-motorized transportation projects as applicable.
- POLICY 4:** Develop a safe and convenient pedestrian circulation system as a portion of the total transportation network.
- Objective 4.1:** Plan and implement Livable Communities Principles and Elements (for further information see **Livable Communities for Mono County Report**, Draft, August 30, 2000):
- Principle 1 Provide a quarter-mile radius development pattern with a mix of uses within that area.
 - Principle 2 Limit speeds to moderate levels (20-30 mph) and roads to a total of two lanes.
 - Principle 3 Landscape edges and walkways and screen parking areas.
 - Principle 4 Create well-connected and easy street crossings.
 - Principle 5 Pedestrian facility design should meet the five basic human needs for security, convenience, efficiency, comfort, and welcome.

Denser development, such as that proposed for the White Mountain Estates Specific Plan area creates easier access for pedestrians and bicyclists and creates the need to develop facilities to meet that need. In compliance with the Circulation Element and RTP policies stated above, the White Mountain Estates Specific Plan contains policies and design standards that require roads with wider shoulders in order to provide pedestrian and bicycle access throughout the development.

TRANSIT IMPACTS

Inyo-Mono Transit currently provides twice weekly transit services between Benton and Bishop which currently stops at the Chalfant Mercantile. School bus services are provided by Eastern Sierra Unified School District. Policies in the Mono County Circulation Element and the Regional Transportation Plan (RTP) promote the development of additional transit facilities throughout the county. Applicable goals, objectives and policies from the Circulation Element and RTP are listed below:

- GOAL I** **Assist with the development and maintenance of transit systems as a component of multi-modal transportation systems in Mono County.**
- POLICY 1:** In association with other regional and local agencies, provide transit services that are responsive to the future needs of commuters and transit dependent persons (e.g. senior citizens, disabled persons, youth, persons without cars).
- Objective 1.1:** Maintain and improve transit services for transit dependent citizens in Mono County, including the continuation and improvement of social service transportation services. Ensure that transit services comply with the requirements of the Americans with Disabilities Act (ADA).
- Objective 1.2:** Support public transit financially to the level determined 1) by the “reasonable to meet” criteria during the annual unmet needs hearing, and 2) by the amount of available funds.

- Objective 1.4:** Pursue all available funding for the provision of transit services and facilities, including state and federal funding and public/private partnerships.
- Objective 1.6:** Work with appropriate agencies to coordinate the provision of transit services in the County in order to provide convenient transfers and connections between transit services.
- POLICY 2:** Promote the development of an inter-modal transportation system in Mono County that coordinates the design and implementation of transit systems with parking facilities, trail systems, and airport facilities.
- Objective 2.1:** Coordinate the design and implementation of transit systems with parking facilities, trail systems, and airport facilities, including convenient transfers among transit routes and various transportation modes.
- Objective 2.3:** Require major traffic generating projects to plan for and provide multiple modes of circulation/transportation. This may include fixed transit facilities, such as bus turnouts and passenger shelters.

The project is estimated to add 117 new residents to Chalfant, including 30 school-age children, 72 persons aged 18-64, and 15 persons 65 years old or older (see Population, Housing, Employment section). School-age children and seniors are often considered transit-dependent. In compliance with the Circulation Element and RTP policies stated above, the White Mountain Estates Specific Plan contains policies that require the project proponents to provide a transit shelter to serve school children and the on-demand transit system.

CONCLUSION

The project will not create significant impacts related to traffic volume, congestion, level of service, pedestrian and bicycle facilities, or transit services. Potentially significant impacts will be present with regard to turn volume increases and associated safety concerns; mitigation measures are required to reduce impacts to less than significant levels. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies.

CIRCULATION MITIGATION

The following proposed mitigation measures mitigate the environmental impact(s) identified in the previous section:

- C-1 Construct all new streets to Mono County Road Standards and in compliance with the Mono County Fire Safe Regulations, Chapter 22 of the Land Development Regulations (White Mountains Estates Specific Plan Circulation Policy 5-A).
- C-2 A grading permit for the road construction and an encroachment permit(s) shall be obtained from the Mono County Department of Public Works prior to approval of the final tract map (White Mountain Estates Specific Plan Circulation Program 5-A).
- C-3 Provide off-site improvements as specified in the Traffic/Circulation Analysis prepared for the project, i.e. install a northbound right-turn lane on Highway 6 according to design requirements of Caltrans and the County. The right-turn lane may include a 250-foot turn pocket and a 120-bay taper. Approval of the proposed right-turn lane shall be obtained from Caltrans prior to approval of the Final Tract Map (White Mountain Estates Specific Plan Circulation Policy 5-B and Program 5-B).
- C-4 A County Service Area Zone of Benefit district or other maintenance mechanism satisfactory to Mono County shall be created by the developer of newly constructed public roads in order to pay for long-term maintenance. The maintenance mechanism shall be formed prior to approval of the Final Tract Map (White Mountain Estates Specific Plan Program 5-C).

- C-5 To provide pedestrian and bicycle access throughout the subdivision, including to the mailboxes and bus stop, subdivision streets shall be constructed with a wider paved section. Working outward from the centerline, each street section shall consist of a 10-foot wide travel lane, a fog line, a four-foot wide paved shoulder, a two-foot wide compacted Class II aggregate base shoulder, and (where applicable) a drainage ditch. These road specifications shall be included on the Final Tract Map (White Mountain Estates Specific Plan Circulation Program 6-A).
- C-6 The project developer shall install an enclosed shaded bus stop within the subdivision. The location of the bus stop shall be determined once the final road layout is determined and shall be agreed upon by the Mono County Department of Public Works, the developer, the Eastern Sierra Unified School District, and Inyo-Mono Transit. The location of the shelter shall be shown on the final tract map. The shelter shall be installed as part of the subdivision's infrastructure (White Mountain Estates Circulation Program 7-A).

CIRCULATION MITIGATION MONITORING

See the mitigation monitoring plan.

NOISE

EXISTING NOISE ENVIRONMENT

Existing noise sources in the project vicinity include traffic and residential noises from the existing White Mountain Estates subdivision.

NOISE IMPACTS

A project will normally have a significant effect on the noise environment if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals for the community in which it is located. The Mono County Noise Element and the Noise Regulations (Chapter 10.16 of the Mono County Code) regulate the noise environment in Mono County.

The proposed project would result in short-term construction related noise impacts and long-term noise impacts related to the additional traffic resulting from the proposed subdivision. Short-term construction related noise impacts would be associated with excavation, grading, and construction activities on-site during construction of the proposed project. Construction related short-term noise levels would be higher than the existing ambient noise levels in the project area but would no longer occur once construction is completed. In addition, construction related short-term noise impacts would be reduced due to the use of manufactured housing which is largely constructed at the factory and then installed on the site. Long-term traffic noise impacts would be minimal since the peak hour traffic generated by the White Mountain Estates project is estimated to be 45 cars (see Circulation section). That figure was based on 57 housing units and may be higher than the figure would be for the proposed 46 housing units.

CONCLUSION

The project will result in less than significant noise impacts; mitigation measures are proposed to reduce those impacts to the lowest feasible levels. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies.

NOISE MITIGATION

The following proposed mitigation measures mitigate the environmental impact(s) identified in the previous section:

- N-1 Construction shall be limited to daylight hours in accordance with the Mono County Noise Regulations (Mono County Code Section 10.16) in order to minimize impacts to nocturnal wildlife species and adjacent sensitive noise receptors (White Mountain Estates Specific Plan Conservation Standard CS-1).
- N-2 Noise levels during all construction activities shall be kept to a minimum by equipping all on-site equipment with noise attenuation devices and by compliance with all requirements of the Mono County Noise Regulations (Mono County Code Section 10.16) (White Mountain Estates Specific Plan Conservation Standard CS-2).
- N-3 During all construction activities, all stationary construction equipment shall be placed so that emitted noise is directed away from sensitive receptors nearest the project site, i.e. existing residential development at White Mountain Estates subdivision (White Mountain Estates Specific Plan Conservation Standard CS-3).
- N-4 During all construction activities, equipment staging areas shall be located the greatest distance possible from the nearest sensitive noise receptors, i.e. residential uses in the existing White Mountain Estates subdivision (White Mountain Estates Specific Plan Conservation Standard CS-4).

NOISE MITIGATION MONITORING

See the mitigation monitoring plan.

AIR QUALITY

EXISTING AIR QUALITY

As of 2006, Mono County was designated a non-attainment area for the state PM₁₀ standard as well as for the ozone standard (see www.arb.ca.gov, State Area Designations Maps). The PM₁₀ classification is for Mono Basin and Mammoth Lakes; both locations are also non-attainment areas for the national PM₁₀ standard (www.epa.gov/air). Particulate matter (PM₁₀) in the Mono Basin results from dust from the exposed lakebed of Mono Lake. PM₁₀ in Mammoth Lakes is primarily a problem in winter, resulting from wood burning and resuspended road cinders. Overall in Mono County, the sources of most PM₁₀ emissions are unpaved road dust/cinders, fugitive windblown dust, and woodstove emissions.

The ozone designation is also for Mammoth Lakes. In the past, the State Air Resources Board concluded that ozone levels in the Great Basin Air Basin (Alpine, Inyo and Mono Counties) that exceeded the state standard were caused by transport from the San Joaquin Valley Air Basin; the Great Basin Unified Air Pollution Control District adopted an Ozone Attainment Plan for Mono County which identified the County as an ozone transport area.

Although there are no air quality data specifically for the Tri-Valley area, the Mono County MEA notes that fugitive windblown dust is a problem in the area, primarily when it creates a safety hazard by blowing across Highway 6. The project site is approximately one mile east of Highway 6. Dust from construction activities is also a concern for residents of the area. Soils in the Tri-Valley are primarily alluvial soils, sand and silt, overlying a layer of volcanic rock (Bishop Tuff). These soils tend to be highly erodible and subject to wind erosion.

AIR QUALITY IMPACTS

The project site is in a very dry desert environment that receives on average only 5.22 inches of rainfall per year. It is in a relatively open area with low and sparse desert scrub vegetation over most of the site. The MEA identifies the Tri-Valley as subject to wind erosion. Strong winds are common and windblown dust can be a problem in the area. The prevailing wind direction in the area is from the north ten months of the year and from the south in November and December, based on data collected at the Bishop Airport climatological station, the nearest station to Chalfant (see Table 2 in the Geology/Soils section). Average annual wind speed is 9 miles per hour (mph); average annual peak gusts are 70 mph (see Table 2).

Construction activities may create temporary impacts to air quality, primarily by creating dust. Roadways in the project will be paved. In compliance with Mono County General Plan policies, White Mountain Estates Specific Plan conditions require that any wood-burning appliances installed in the project be Phase II EPA certified and that wood-burning appliances be used only as a secondary heating source. White Mountain Estates Specific Plan policies also require land disturbance to be minimized and dust generated during construction to be controlled.

Over the life of the project, disturbed areas that are not revegetated could cause ongoing dust and air quality impacts. White Mountain Estates Specific Plan policies require the project to delineate driveways and building envelopes for all lots on the final tract map in order to minimize site disturbance.

CONCLUSION

Potentially significant air quality impacts may occur as a result of the project; mitigation measures are required to reduce impacts to a less than significant level. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies.

AIR QUALITY MITIGATION

The following proposed mitigation measures mitigate the environmental impact(s) identified in the previous section:

- AQ-1 Only energy star rated heating systems and appliances shall be installed in the residences. No units shall have wood-burning appliances as the primary heating source (White Mountain Estates Specific Plan Conservation Standard CS-5).
- AQ-2 In compliance with Mono County General Plan policies, any wood-burning appliances installed in the project shall be Phase II EPA certified (Mono County General Plan, Conservation/Open Space Public Health and Safety policies, Objective A, Action 6.1). This requirement shall be reiterated in the CC & Rs for the project (White Mountain Estates Specific Plan Conservation Standard CS-6).
- AQ-3 An air quality permit shall be obtained from the Great Basin Unified Air Pollution Control District (White Mountain Estates Specific Plan Conservation Standard CS-7).
- AQ-4 A final Grading Plan, based on the preliminary grading and drainage plan in this document, must be approved by the Mono County Department of Public Works prior to recording the Final Tract Map. The Grading Plan must include a comprehensive erosion and sediment transport control plan. Grading shall be minimized; structures shall be designed to fit the site (White Mountain Estates Specific Plan Conservation Standard CS-8).
- AQ-5 Building envelopes and driveways shall be established on the Final Phased Tract Map for all lots in order to reduce site disturbance and associated dust, to avoid fault hazards, to protect vegetation and wildlife, to minimize flood and drainage impacts, and to establish

- that there is sufficient room for leach fields and replacement fields. The land use plan shall also indicate lots where Secondary Units may be allowed. On lots larger than one acre in size, where large animals such as horses or llamas are allowed, animal confinement areas shall also be established on the Final Phased Tract Map in order to reduce site disturbance, protect vegetation, and to ensure that there is sufficient area for the leach field, replacement field, and animal areas (White Mountain Estates Specific Plan Conservation Standard CS-9).
- AQ-6 Building envelopes for each residential parcel shall be located to avoid development on ridgelines or ridgetops, when feasible, and to minimize cut and fill (White Mountain Estates Conservation Standard CS-10).
- AQ-7 In order to minimize the potential for dust erosion and visual impacts, land disturbance (grading, cut and fill) for road construction, infrastructure installation, and building construction shall be limited to the areas identified on the Final Tract Map for roads, utilities, buildings, and driveways (White Mountain Estates Specific Plan Conservation Standard CS-11).
- AQ-8 Dust generated during construction shall be controlled by the use of watering or other Best Management Practices. All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage (White Mountain Estates Specific Plan Conservation Standard CS-12).
- AQ-9 Speed limits on the construction site shall be reduced to minimize dust and windborne erosion (White Mountain Estates Specific Plan Conservation Standard CS-13).
- AQ-10 Construction materials (rock, debris, etc.) that are not utilized as road fill shall be removed to a permitted landfill or other approved site (White Mountain Estates Specific Plan Conservation Standard CS-14).
- AQ-11 The project proponent shall prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit a Notice of Intent to comply with provisions of the State Water Resources Control Board's Stormwater NPDES Permit for Construction Activities (White Mountain Estates Specific Plan Conservation Standard CS-15).
- AQ-12 All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e. greater than 25 miles per hour averaged over one hour) (White Mountain Estates Specific Plan Conservation Standard CS-16).
- AQ-13 Adjoining streets shall be washed or swept clean of tracked-out vehicle dirt (White Mountain Estates Specific Plan Conservation Standard CS-17).
- AQ-14 All material transported on-site or off-site shall be sufficiently watered or securely covered to prevent excessive amounts of dust (White Mountain Estates Specific Plan Conservation Standard CS-18).
- AQ-15 All trucks hauling excavated or graded material off-site shall comply with State Vehicle Code Section 23114 which contains requirements for covering loads so materials do not blow or fall from a truck (White Mountain Estates Specific Plan Conservation Standard CS-19).

AIR QUALITY MITIGATION MONITORING

See the mitigation monitoring plan.

WATER RESOURCES

WATER RESOURCES SETTING

The project site is located in an arid desert environment, in an area that receives an average of 5.22 inches of rainfall per year. Surface water resources are limited and largely ephemeral. Groundwater is the primary source of water for domestic and irrigation uses in the Tri-Valley area.

The Mono County MEA provides the following information concerning water resources in the Tri-Valley:

The Benton, Hammil and Chalfant Valleys form a northern extension of the Owens Valley. The three valleys form a single watershed that is tributary to the Owens River (Williams, 1979). The valleys are bounded on the east by the White Mountains and on the west by the southeast sloping lava flows of the Volcanic Tablelands and the Benton Range.

Runoff from the White Mountains, the Volcanic Tablelands, and the Benton Range flows into these valleys and ultimately drains into the Owens Valley, in Inyo County. Streams originating in the White Mountains contribute most of the runoff in this watershed. The streams draining the slopes on the western side of this watershed generally do not contribute much water to the area. All of these drainages are ephemeral, except for the reach immediately downstream of Benton Hot Springs which contains a small, year-round, seepage flow. An ephemeral wash drains the length of the watershed from Benton to Laws in Inyo County. This wash is the main stem of the drainage system and, during periods of heavy precipitation, it conveys floodwaters downstream (Williams, 1979). Most of the runoff in this basin is either captured as surface water and used for irrigation on local farms, or it drains into the valley's deep alluvium and is captured as groundwater.

The Mono County MEA also discusses groundwater recharge in the Tri-Valley:

Benton/Hammil/Chalfant Valley Basin is a 250-square-mile basin drained by Fish Slough into the upper reaches of the Owens Valley. Surface water flow is southward from the Benton Valley to Hammil and then into Chalfant Valley. A water balance for Chalfant Valley shows a net water balance outflow from the Chalfant Valley of 13,700 acre-feet per year and a net water balance outflow from the Hammil and Benton Valleys of 5,900 acre-feet per year (Nolte and Associates, 1980); 91 percent of the water balance comes from run-off from the White Mountains east of the valley. This run-off is in small stream channels that are perennial at the higher elevations but are ephemeral on the lowest reaches and seldom flow to the center of the valley. All of this water infiltrates into the fill material and becomes recharge to the basin fills of the Hammil/Chalfant basin.

Water resources data in the MEA are general, describing hydrology over large areas of the county. Site-specific hydrogeologic studies for the proposed project were prepared by Golden State Environmental, Inc. (GSE) utilizing available documentation, the installation and logging of shallow geotechnical trenching (Sierra Geotechnical Services, Inc., 2005), and the installation and testing of two wells on the project site. The work done by Golden State Environmental, Inc. was peer reviewed by AMEC Earth & Environmental, Inc. several times and the study was amended to address points raised by AMEC.

The hydrogeologic study prepared by Golden State Environmental Inc. presents the following concerning site hydrogeologic conditions:

WME is located within the Tri-Valley area, within the Chalfant Valley. The Chalfant Valley is bounded on the east by the White Mountains and on the west by sloping lava and pyroclastic flows

of the Bishop Tuff. The fault system that runs north-south through the WME Phase 2 upper development generally defines the eastern margin of the alluvial groundwater system.

...At WME Phase 2, groundwater appears to originate from multiple sources. These sources include (1) as underflow through the Tri-Valley Basin, (2) from infiltration of runoff into alluvium from the drainage to the immediate north of Coldwater Canyon (herein referred to as "North Coldwater Canyon" for reference purposes) and, (3) from complex flow systems probably present within the White Mountains, specifically the Piute Creek, North Coldwater Canyon, and Coldwater Canyon.

Groundwater flow in the vicinity of WME Phase 2 generally follows topography, flowing to the east-southeast within the alluvial fan soils, and north to south in the valley alluvium. Depth to groundwater on Lot 40 (now Lot 41 where the first well is located) is approximately 250 feet below ground surface (bgs). Wells located within the WME Phase 2 lower development are considered to be completely within the alluvial fans and/or valley alluvium. If wells will be installed to the east of the fault zone, these wells would likely be installed in soils/bedrock recharged in the White Mountain valleys to the immediate east of the development.

The geology in the vicinity of WME is characterized by alluvial fan deposits that are superposed over valley fill deposits, both of Quaternary age. The alluvial fan deposits consist of poorly-sorted, unconsolidated gravel, sand, silt and clay. The valley fill deposits are composed of moderately to well-sorted, unconsolidated lenses and layers of sand, silty sand, and gravelly sand, and layers and lenses or massive beds of silty clay, originating mostly from detritus eroded from the bedrock mountains upslope to the east. Structurally, the WME property is situated within the Bishop Basin, one of two structural basins formed by a narrow, north-south trending steep-sided graben. The eastern side of the graben is delineated by the White Mountain Fault Zone.

Golden State Environmental estimated groundwater recharge for North Coldwater Canyon (the drainage above the project site) utilizing the Maxey-Eakin Method which estimates groundwater recharge by using precipitation versus elevation relationships, assuming method-specific estimates of recharge as a percent of precipitation. GSE notes that:

The Maxey-Eakin Method is a widely used groundwater recharge estimation technique used in arid locations throughout the Basin and Range, and is the primary method of recharge estimation used by the Nevada Department of Conservation and Natural Resources in its reconnaissance studies of groundwater resources. The Maxey-Eakin Method is a good predictor of recharge and, as an estimate, is likely environmentally conservative in that the Maxey-Eakin Method has been noted to underestimate groundwater recharge in areas of low surface runoff.

Golden State Environmental calculated the groundwater recharge for North Coldwater Canyon to be 30 acre-feet per year.

Two wells were drilled and tested on the project site. Well #1 is located on Lot 41; Well #2 is located on Lot 12. The purpose of the second well was to "expand the water supply provided by WME Well #1, in addition to providing data for evaluation of the increased reliability of the water supply for the proposed development" (Golden State Environmental, 2006). A 24-hour pumping and recovery test was performed on each of the wells following their installation (on Well #1 in 2004 and on Well #2 in 2005). Following AMEC's review of the pump test data and as a result of AMEC's concerns that data from the previous two 24-hour pump tests was insufficient to delineate the aquifer parameters, a 72-hour pumping and recovery test was performed on Well #2 utilizing Well #1 as an observation well. Specific data from the pump tests is included in GSE's reports.

Based on results from the 72-hour pumping and recovery test and available geological and hydrogeological documentation, Golden State Environmental noted the following about the aquifer in the vicinity of the project site:

The geology of the valley fill materials contains sand and gravels with intervening silts and clays associated with younger alluvial fan deposits. In the vicinity of the proposed development, the source of the alluvium is from the mountain front escarpment (White Mountains) to the east. Numerous faults are mapped along this escarpment. These faults, along with the interbedded silt and clay deposits, are capable of producing vertically and laterally discontinuous stratifications within the alluvium, and can act as semi-permeable boundary conditions or barriers to groundwater flow within the aquifer.

The influence of faulting on groundwater movement east of WME Well #1 and Well #2 is apparent by the presence of springs east of Fault #4, indicating a damming and/or spreading of groundwater behind Fault #4 and its associated minor faults. The faults act as groundwater barriers influencing spring discharge with water spilling over low spots in the surface expression of the fault. In addition, an undetermined amount of underflow and leakage through the faults would be expected as well, further contributing to the groundwater system to the west of the faults.

The conceptual model that appears to be supported by the current data is that of a hydrogeologic setting consistent with a leaky aquifer system....

Measured groundwater levels in WME Well #1 and WME Well #2 are similar....The similarity in groundwater elevations between the two (2) wells (WME Well #1 and WME Well #2) indicates that they are screened in the same aquifer. Moreover, the measured response in Well #1, to pumping in Well #2, suggests that both wells are screened in the same aquifer, that is, the main valley aquifer.

The data also indicated that pumping of WME Well #2 produced an estimated radius of influence (ROI) of approximately 1,000 feet. The eastern limit of the ROI associated with WME Well #2 is over 1,000 feet to the west of Fault #4 and the springs. Assuming (conservatively) a similar radius of influence resulting from the pumping of WME Well #1, the eastern limit of the ROI associated with WME Well #1 is over 330 feet to the west of Fault #4 and the springs. Interpretation of the hydrogeologic conditions suggests that the springs result from the damming of the fault causing the groundwater to daylight. This damming presents a barrier to groundwater flow and consequently should limit any interaction between the ROI and groundwater system upgradient of the faults and associated springs, should a greater than estimated ROI occur. Therefore, impact to the springs from the pumping of either well is not expected to produce a significant impact. Similarly, impact to the existing WME Phase I well, located approximately 1,200 feet northwest and down-slope of WME Phase II Well #2 is also not expected to be significant.

Golden State Environmental, Inc. estimated water demand for the proposed project as follows:

Based on GSE's evaluation and analysis of the data for the site, estimates of the annual domestic water demand for the proposed residential subdivision originally comprising an anticipated 40 single-family dwellings was 40 acre-feet (AF/yr). However, the latest proposed development is for 45 lots with a corresponding anticipated demand of 45 AF/yr. Based on this new requirement, the volume of water necessary to meet this demand is approximately 28 gallons per minute (gpm), 24 hours per day. This demand can be met from either one of the two wells, or from both of the wells, each pumping at a rate of 14 gpm. By pumping at a higher rate of 84 gpm, the demand could be met in eight (8) hours; or approximately 42 gpm, if water is produced from both wells. Assuming a pumping rate of 84 rpm from only one (1) well, the estimated drawdown, presuming a well efficiency of approximately 32 percent, is on the order of about 44 feet. The estimated available groundwater for development beneath the property is 1,700 AF (GSE 2006), not including inflow or

outflow. Based on this calculation, the estimated water demand for the proposed development of 45 AF/yr appears to represent only about 2.6 percent of the current water resource in storage beneath the property. Over a ten (10) year period, the estimated 450 AF required for the development represents about 27 percent of the total available resource, not including any recharge to the system.

Groundwater quality samples were collected from Well #1 and Well #2 and analyzed for general minerals, metals (including arsenic), and radioactivity. The results were compared with water quality data for the spring on the project site and the well for the existing White Mountain Estates subdivision. That comparison showed no significant difference between water from Well #1 and Well # 2 and water from the existing subdivision well. The water meets current drinking water standards and is suitable as a potable water source. A table showing the specific water quality results is contained in the August, 2005 report prepared by Golden State Environmental, **Addendum to Preliminary Hydrogeologic Investigation, White Mountain Estates—Phase 2, Chalfant Valley, Mono County, California.**

Golden State Environmental concluded the following, based on the data compiled and evaluated:

...Both of the wells are constructed within the main valley aquifer and thus will produce groundwater from a known major source...

Review of available data indicates that the Chalfant Valley area may be experiencing a decline in water levels that can be attributed at least in part to the reduced amounts of annual rainfall, and not solely due to the reported over-pumping as presented in the MHA report. Therefore, it is possible that, with the same amount of groundwater extraction, and with the possible resumption of normal water-supply conditions in the area over the long term, groundwater levels may return to or near former levels.

Assuming a vertical saturated thickness of the aquifer of at least 223 feet and an approximate surface area for the project of 76.58 acres, the estimated total volume of currently saturated sediments solely beneath the property is 17,077 AF. Assuming specific yield is approximately 10 percent, the current volume of available groundwater beneath the property is estimated at 1,700 AF. It is important to note that these calculations do not include inflow or outflow, and only include groundwater in storage directly beneath the property. Based on this calculation, the estimated water demand for the proposed development of 40 AF/yr appears to represent only about 2.5 percent of the current water resource that is currently in storage beneath the property. Over a ten (10) year period, the estimated 400 AF required for the development represents about 24 percent of the total available resource, not including recharge to the system.

The availability of groundwater for the proposed Phase 2 development should also be considered a combination of groundwater flow directly from the White Mountains and groundwater flow through Chalfant Valley. The presence of multiple faults and springs east of the two (2) wells indicates probable additional recharge through this hydrogeologic system. Evaluation of the hydrogeologic conditions suggests that the two wells are screened in the main valley aquifer. Consequently, the water supply needs of the proposed Phase 2 development should be met by using the groundwater produced from these two (2) wells.

WATER RESOURCES IMPACTS

Impacts to water resources in the project vicinity could include potential impacts to the aquifer underlying the project site, as well as to streams and springs and existing wells in the vicinity.

AMEC, in its final review of the water resource documents (2006), summarizes the environmental issues:

POTENTIAL IMPACT ASSESSMENT

Issue: Potential Groundwater Recharge

Potential recharge is important since withdrawing groundwater from an area at a rate greater than it is recharged will cause the water level in the aquifer to experience long term declines. The project proponents contend that the 40 proposed lots will require 40 acre feet/year of water. GSE estimates of recharge from the drainage basin above the site will provide up to 30 acre feet of water per year. The balance of the water is to be supplied by other sources. These other sources include input from neighboring basins, subsurface flow through the Chalfant Valley Aquifer, and septic return. Although the contribution of water to the area of the proposed development from the other sources is not well defined, it is apparent that the potential exists for there to be adequate recharge to the project area.

Issue: Impact to Neighboring Phase 1 Domestic Supply Well

Immediately west of the proposed development is an existing development that has a public water supply well. This well is approximately 1,000 feet from the closest proposed White Mountain Estates (WME) domestic supply well. The distance drawdown assessment prepared by GSE indicates that the area of influence of the WME wells is 450' at a pumping rate of 25 gallons per minute (the proposed required rate to meet 40 acre feet demand). Although the methods used to develop these figures were not well documented in GSE's reports, it is apparent from their assessment that the pumping of the WME's wells will have a minimum impact on the Phase 1 domestic well.

Issue: Potential Impact to Local Springs

Within the proposed project area are several springs, two of which are on the subject site. AMEC understands that these springs are important to wildlife and the local ecology. GSE has provided a geologic cross section of the project area. This cross section is based on data obtained from the geologic conditions exposed in the shallow fault trench excavations, the onsite test wells and local topography. The occurrence of local springs is depicted in the cross section as a function of faulting and subsurface flow upslope from the White Mountains. The cross section also indicates the groundwater tapped by the project test wells is in a separate and lower aquifer west of the springs. AMEC concurs with these basic geologic concepts. Therefore, it is unlikely that pumping of the aquifer below the springs will have a significant impact on their flows.

Issue: Long Term Sustainability of the Resource

Without consideration for recharge, GSE contends that over a period of ten years about 24 % of the available water within the aquifer will be depleted. Following GSE's logic the site has a potential development life of 40 years. Although this type of assessment is generally considered outmoded, the combination of information provided by GSE including potential recharge, soil conditions and potential area of influence of the WME wells suggests that the resource may be sustainable though a reasonable development life expectancy.

SUMMARY AND RECOMMENDATIONS

The water resource information provided by GSE through the submittal of documents to the County of Mono from May 10, 2005 to April 28, 2006 indicates that the potential impact to the water resources in the immediate vicinity of the proposed WME development should be negligible. Given that some gaps remain in the justification for the methods of analysis used by GSE in formulating

their assessment and conclusions we offer the following suggestions should the County of Mono agree to the proposed development.

1. Include measures for water conservation within the approval. Conservation measures may include xeriscape landscaping coupled with high efficiency irrigation methods.
2. Water use could be metered with a tiered rate schedule.
3. Septic systems could be designed to promote return flow and minimize evaporation.
4. Surface runoff could be directed to unlined detention basins that promote infiltration and groundwater recharge.

The White Mountain Estates Specific Plan requires all landscaping on-site to be predominantly xeriscape and water-conserving fixtures to be installed in all development on-site including irrigation systems. The storm drainage system for the project directs runoff through a series of drainage channels and eventually off-site to an undeveloped area where infiltration and groundwater recharge can occur.

CONCLUSION

Impacts to water resources will be less than significant; mitigation measures are proposed to further reduce those impacts.

WATER RESOURCES MITIGATION

The following policies and/or standards from the White Mountain Estates Specific Plan provide mitigation for the environmental impact(s) identified in the previous section:

- WR-1 All landscaping on-site shall be predominantly xeriscape and fire safe in compliance with Design Standard DS-21 (White Mountain Estates Specific Plan Conservation Standard CS-38).
- WR-2 Water conserving fixtures shall be installed in all development on-site, including all residential structures and irrigation systems. This requirement shall be reiterated in the CC & Rs for the project (White Mountain Estates Specific Plan Conservation Standard CS-39).
- WR-3 Prior to the final phased map, the developer shall submit a complete permit application for a domestic water supply and receive a domestic water permit for the proposed project from the Mono County Environmental Health. The water system shall be installed, passed final inspection, and fully operational prior to recording the final map (White Mountain Estates Specific Plan Land Use Program 1-D and Conservation Standard CS-40).
- WR-4 The Technical, Managerial and Financial Capacity report required with the permit application for the water system shall determine the source capacity of the two wells for the proposed project, or the developer's qualified hydrologist may propose an alternative measure for determining the apparent long term yield for review by the Environmental Health Department. The Technical Report must take into consideration the water demand attributable to secondary residences that may be constructed on the proposed project and on the existing White Mountain Estates subdivision if consolidation were to occur. If the data and conclusions in the report do not meet regulatory requirements, the Mono County Environmental Health cannot issue a permit for the water system. In that case, the applicant may choose to redesign the project and complete additional CEQA analysis on the redesigned project (White Mountain Estates Specific Plan Conservation Standard CS-41).
- WR-5 The developer shall ensure that the new wells constructed for the project are not impacting the existing well operated by the White Mountain Estates Mutual Water Company. The developer may satisfy this requirement by implementing a monitoring plan to substantiate

that there is no significant impact to the existing well. The monitoring plan must be approved by the Mono County Environmental Health prior to recording the final tract map (White Mountain Estates Specific Plan Conservation Standard CS-42).

- WR-6 Future development will require the installation of individual sewage disposal systems on each parcel. The applicant shall submit a soils suitability report, prepared by a registered civil engineer licensed in the state of California, supporting the suitability of soils for installation of individual sewage disposal systems. The report shall contain, at a minimum, two percolation test results and two soil profile results for each new parcel to be created, or percolation test results and soil profile results as required by the Environmental Health Department. The report shall document, to the satisfaction of the Environmental Health Department, that the soil structure meets or exceeds applicable State and County standards for the siting and installation of individual sewage disposal systems. (White Mountain Estates Specific Plan Conservation Standard CS-43).

WATER RESOURCES MITIGATION MONITORING

See the mitigation monitoring plan.

HAZARDS

HAZARDS SETTING – OVERALL

The project site is located in an area identified as having a very high fire hazard (MEA, p. 304), as is most of Mono County. It is also in an area subject to seismic hazards. Although the project site is not in an area identified by FEMA as subject to flood hazards (MEA Figure 38), and despite the fact that the area receives very little annual rainfall, the proposed project is located at the base of the White Mountains in the path of runoff flows which can be extremely high.

HAZARDS IMPACTS--FIRE

The development of additional housing in an area with a high fire hazard could subject more people and property to that fire hazard. The project will have an on-site water system with sufficient fire flow to meet the fire flow requirements of 1,000 gallons per minute (gpm) established by the Chalfant Valley Fire Protection District (FPD). Roads onsite have been designed to Mono County Road Standards to accommodate emergency vehicles. Landscaping is required to be fire safe and fire safe planting guidelines have been provided in the Specific Plan. The project must comply with Mono County's Fire Safe Regulations (Chapter 22 of the Mono County Land Development Regulations) that address emergency access, signing and building numbering, water supply reserves for emergency fire use, road and driveway grades, and vegetation modification around structures. Development will also be required to comply with current requirements of the Uniform Fire Code (building materials, roofing materials) to ensure that structures are fire safe. Development will pay fire mitigation fees established by the Chalfant Valley Fire Protection District in order to offset the impact associated with additional development. The project proponents are required to provide a "will serve" letter from the Chalfant FPD. Design requirements for the project will mitigate the potential high fire hazard to a less than significant level.

Additional information on fire and emergency medical services in the area is provided in the Public Services section of this chapter.

HAZARDS IMPACTS--SEISMIC

See the previous section on seismic hazards under Geology/Soils.

HAZARDS IMPACTS--FLOOD

The Drainage Report prepared for the project notes that the proposed project:

“...lies within the path of a potentially dangerous flood zone...The adjacent canyons are capable of producing extremely high runoff flows, which a portion of flow directly through the project site. These flows have the potential to wash out proposed roadways and/or flood future home sites causing severe losses.”

(Eastern Sierra Engineering, 2005, p. 7)

In response to the flooding potential onsite, Eastern Sierra Engineering designed the drainage system for the project to utilize existing topography and flow paths to minimize impacts to the natural drainage conditions onsite. Additional runoff resulting from the development will be channeled into the proposed drainage system. Flows will eventually end up in the same place as before the project began. Infrastructure and housing onsite will be protected from flooding impacts by drainage ditches, swales, and infiltration areas. Design requirements for the project will mitigate the potential flood hazard to a less than significant level.

The Drainage Report concludes that:

“By enforcing a rather conservative drainage system, as outlined in this study, potential risks are reduced, which would protect future homes, increase public safety, secure property investments, and enhance the overall quality of the project and surrounding infrastructure.”

(Eastern Sierra Engineering, 2005, p. 7)

CONCLUSION

Development on the project site could result in potentially significant impacts from fire, seismic, and flood hazards; mitigation measures are required to reduce potential impacts to a less than significant level. The proposed mitigation measures have been incorporated into the Specific Plan as standards and policies.

HAZARDS MITIGATION

The following proposed mitigation measures mitigate the environmental impact(s) identified in the previous section:

- H-1 The development shall comply with California State Fire Codes as well as with the Mono County Fire Safe Requirements (Mono County Land Development Regulations, Chapter 22), pertaining to emergency access, signing and building numbering, emergency water supplies, and vegetation modification. (White Mountain Estates Specific Plan Policy 13-A).
- H-2 The project shall comply with the following minimum requirements in order to increase fire safety:
 - The minimum space between buildings shall be 30 feet.
 - Each house/parcel shall have a standardized propane shutoff box.
 - The propane tanks for the project shall be located on the lot designated for utility uses.
 - The facilities for the propane tanks shall include a containment facility and automatic shutoff valves.
 - The project shall have illuminated house numbers on each residence.

- The Fire District shall review the hydrant plan prior to approval of the Final Tract Map.
- A hydrant shall be installed by the water tanks.

Prior to approval of the Final Tract Map, the project proponent shall provide the County with a "will serve" letter from the Chalfant Valley FPD, indicating its capability to serve the proposed development and its approval of fire protection and suppression components of the proposed project design. Fire mitigation fees shall be collected as part of the building permit application process (White Mountain Estates Specific Plan Program 13-B).

- H-3 Landscaping shall be utilized to minimize potential visual impacts resulting from development and to minimize erosion. Landscaping on individual residential lots shall be predominantly xeriscape (i.e. 65 percent of landscaping on an individual lot shall be xeriscape) and fire safe. The requirement for xeriscapic and fire safe landscaping shall be reiterated in the CC & Rs for the project. See DS-21 for specific provisions regarding xeriscape and fire safe landscaping (White Mountain Estates Specific Plan Conservation Standard CS-29).
- H-4 The storm drainage system shall be designed to accommodate the runoff from a 100-year 24-hour storm event (White Mountain Estates Specific Plan Policy 10-A).
- H-5 The storm drainage system shall be designed and constructed as specified in the preliminary drainage figures--see Appendix A, Map Set, Figure 5 (White Mountain Estates Specific Plan Program 10-A).
- H-6 The storm drainage system shall be maintained by a Zone of Benefit and/or by the CSA, so that it is fully functioning at all times (White Mountain Estates Specific Plan Program 10-B). Mitigation for seismic hazards is listed under Geology/Soils Mitigation in a previous section.

HAZARDS MITIGATION MONITORING

See the mitigation monitoring plan.

IV. PROJECT ALTERNATIVES

INTRODUCTION

"An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." CEQA Guidelines Section 15126.6

The CEQA Guidelines require the discussion of alternatives to a proposed project. The Guidelines specifically require the analysis of a No Project Alternative (i.e. the project does not occur) and one or more development alternatives. The development alternatives must be "reasonable" ones that "... could feasibly attain most of the basic objectives of the project... An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (CEQA Guidelines Section 15126.6).

The alternatives analysis focuses on alternatives that are capable of avoiding or substantially lessening significant effects of the project, even if the project objectives are impeded to some degree or are most costly. The objective of the White Mountain Estates Specific Plan is to increase the amount of single-family housing in the Chalfant Valley in an area adjacent to existing development in order to minimize impacts to surrounding public lands.

The DEIR identifies seven potentially significant environmental effects of the project that, with mitigation, can be reduced to less than significant levels.

1. Public Service Impacts (fire and emergency medical services);
2. Geology/Soils Impacts (erosion);
3. Vegetation and Wildlife Impacts (sensitive plant species and habitats);
4. Circulation Impacts (turn volume increases and safety concerns);
5. Air Quality Impacts (dust and erosion);
6. Visual Resources; and
7. Hazards—seismic, flood, fire.

All other impact areas are not potentially significant; mitigation measures are proposed in the DEIR for several of these impact areas to reduce impacts to even lower levels.

A. NO PROJECT ALTERNATIVE

In this alternative, no development would occur on the project site; it would remain in its present state. The No Project Alternative would have the following effects in comparison to the proposed project:

- It would eliminate additional impacts to public services in the area (schools, law enforcement, fire, emergency medical services, recreation);
- Dust erosion impacts to soils and air quality would remain as they currently are;
- Impacts to the sensitive plant species identified on-site and the riparian/wetlands areas would remain as they are now with some damage to the wetlands area from off-road vehicles. The project prohibits any uses in those areas other than passive non-motorized recreational activities such as biking, hiking and horseback riding.
- Circulation impacts on Highway 6 related to turn volume increases and safety concerns would not occur;
- Fault hazards to the additional proposed housing would not occur.
- Flood hazards to the additional proposed housing would not occur; and
- Additional fire hazards to new and existing housing would not occur.

This alternative avoids all potentially significant impacts of the project but it does not meet the project objectives.

B. REDUCED DEVELOPMENT, 39 LOTS

In this alternative, thirty-nine (39) single-family residences would be developed on lots ranging in size from 0.50 acres to 0.96 acres, with the majority of the lots being 0.50 to 0.55 acres. The lot designated for utility uses would be developed with the water tanks and propane tanks. The steeper eastern portion of the project site, where the identified sensitive plant species and the riparian areas occur and where extensive faulting occurs, would not be developed.

In this alternative, the eastern portion of the project site would be designated as open space and the uses on that lot would be limited to passive non-motorized recreational activities. This alternative would include the proposed storm drainage system, individual septic systems, a community water system, a community propane system, underground utilities, wider roads to allow for pedestrian and bicycle access throughout the development, and the central mailboxes and bus stop in the proposed project.

This alternative would have the following effects in comparison to the proposed project:

- The visual impacts would be reduced since there would be less development and there would be no development on the steeper eastern portion of the project site;
- This alternative would result in additional impacts to public services in the area (schools, police, fire, emergency medical services, recreation) but those impacts would be reduced slightly since there would be eighteen fewer residents with this alternative (99 residents vs. 117 – a 15 percent reduction in the projected population);

- Dust erosion impacts to soils and air quality would be reduced since the steeper eastern portion of the project site would not be developed and less land overall would be developed;
- Impacts to the sensitive plant species identified on-site and the riparian/wetlands areas would be similar to those for the proposed project since this alternative also avoids development in areas with identified sensitive plant species and plant communities and prohibits any uses in those areas other than passive non-motorized recreational activities such as biking, hiking and horseback riding;
- Circulation impacts on Highway 6 related to turn volume increases and safety concerns would be reduced since there would be fewer houses and people with this alternative (39 houses vs. 46, 99 people vs. 117);
- Seismic hazards to persons and property would be reduced since there would be fewer houses and residents and there would be no development on the eastern portion of the site which is crisscrossed with faults;
- Flood hazards to persons and property would remain essentially the same;
- Fire hazards to persons and property would be reduced since there would be fewer houses and residents; and
- Impacts to other resources that were not identified as potentially significant would also be reduced since the development would be smaller in size.

This alternative would meet the project objective of providing additional single-family residential housing although there would be 15 percent less housing than in the proposed project (7 fewer single-family residences). It would still meet the entire need for above moderate housing in the Tri-Valley identified in the Housing Element.

C. LARGE-LOT DEVELOPMENT, 19 LOTS

In this alternative, nineteen (19) single-family residences would be developed on lots ranging in size from 1.00 acres to 1.86 acres, with the majority of the lots between 1.00 and 1.2 acres. A lot designated for utility uses would be developed with the water tanks and propane tanks. The steeper eastern portion of the project site, where the identified sensitive plant species and the riparian areas occur and where extensive faulting occurs, would not be developed.

In this alternative, the eastern portion of the project site would be designated as open space and the uses on that lot would be limited to passive non-motorized recreational activities. This alternative would include the proposed storm drainage system, individual septic systems, a community water system, a community propane system, underground utilities, wider roads to allow for pedestrian and bicycle access throughout the development, and the central mailboxes and bus stop in the proposed project.

This alternative would have the following effects in comparison to the proposed project:

- The visual impacts would be reduced since there would be less development and there would be no development on the steeper eastern portion of the project site;
- This alternative would result in additional impacts to public services in the area (schools, police, fire, emergency medical services, recreation) but those impacts would be reduced

since there would be fewer residents with this alternative (48 residents vs. 117—a 59 percent reduction in the projected population);

- Dust erosion impacts to soils and air quality would be reduced since the steeper eastern portion of the project site would not be developed and less land overall would be developed;
- Impacts to the sensitive plant species identified on-site and the riparian/wetlands areas would be similar to those for the proposed project since this alternative also avoids development in areas with identified sensitive plant species and plant communities and prohibits any uses in those areas other than passive non-motorized recreational activities such as biking, hiking and horseback riding;
- Circulation impacts on Highway 6 related to turn volume increases and safety concerns would be reduced since there would be fewer houses and people with this alternative (19 houses vs. 46, 48 people vs. 117);
- Seismic hazards to persons and property would be reduced since there would be fewer houses and residents and there would be no development on the eastern portion of the site which is crisscrossed with faults;
- Flood hazards to persons and property would be reduced since there would be fewer houses and residents;
- Fire hazards to persons and property would be reduced since there would be fewer houses and residents; and
- Impacts to other resources that were not identified as potentially significant would also be reduced since the development would be smaller in size.

This alternative would meet the project objective of providing additional single-family residential housing although there would be 59 percent less housing than in the proposed project (27 fewer single-family residences). It would still meet the entire need for above moderate housing in the Tri-Valley identified in the Housing Element.

V. IMPACT OVERVIEW

SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

The DEIR identifies seven potentially significant environmental effects of the project that, with mitigation, can be reduced to less than significant levels.

3. Public Service Impacts (fire and emergency medical services);
4. Geology/Soils Impacts (erosion);
3. Vegetation and Wildlife Impacts (sensitive plant species and habitats);
4. Circulation Impacts (turn volume increases and safety concerns);
5. Air Quality Impacts (dust and erosion);
6. Visual Resources; and
7. Hazards – seismic, flood, fire.

All other impact areas are not potentially significant; mitigation measures are proposed in the DEIR for several of these impact areas to reduce impacts to even lower levels.

SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL EFFECTS

The project would not result in any significant unavoidable environmental effects.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The project would result in the conversion of 55.65 acres of desert scrub to a developed condition, assuming that a house is built on the remainder parcel. If a house is not built on the remainder parcel, the project would result in the conversion of 36.42 acres to a developed condition. While the Specific Plan allows only 40 percent maximum site disturbance on the residential parcels, development of housing, roads, utilities, fencing, and landscaping would fragment the existing habitat and vegetation and would essentially convert all of the area designated for residential uses from its current condition to a developed condition. The project would utilize on-site septic systems and a community water system with wells. Once the site is developed with residential uses it is unlikely that those uses would change.

GROWTH-INDUCING IMPACTS

An EIR must discuss the ways in which a project "... could foster economic or population growth, or the construction of additional housing, either directly or indirectly in the surrounding environment" (CEQA Guidelines Section 15126.2 d). The proposed subdivision and commercial development would create 46 permanent households and 117 permanent residents in Chalfant.

This would result in a 25 percent increase over Chalfant's population of 465 persons in 2000 and a 12 percent increase over the Tri-Valley population of 954 persons in 2000. The growth in population will create impacts to schools, to public services (fire, police, emergency medical services, roads), and to county services such as libraries, parks and recreational facilities, solid waste facilities, and administrative services.

Impacts of this growth are discussed in applicable sections of the DEIR (e.g. circulation, public services, noise, etc.). The White Mountain Estates Specific Plan has policies that require the development to contribute its fair share to the improvement of parks and recreational facilities and to the provision of additional police and emergency medical services. Impacts to libraries will be mitigated through property taxes. Impacts to schools and fire protection services will be mitigated through the collection of impact fees at the time of development.

Chalfant is primarily a residential community with extremely limited commercial and agricultural facilities and no industrial or manufacturing sites. There is very little privately owned land in the area and an extremely limited portion of that land is designated for commercial or light industrial uses. The Tri-Valley Area Plan policies in the Mono County General Plan Land Use Element support the development of "small-scale commercial uses that serve the communities" in Chalfant.

Tri-Valley Area Plan Policies, Mono County General Plan Land Use Element
OBJECTIVE D

Provide adequate commercial and public facilities and improved access to county services to serve visitors and residents in the Tri-Valley.

- Policy 1: Designate adequate lands compatible with the rural character of the Tri-Valley along Highways 6 and 120 in Benton and Chalfant for small-scale commercial uses that serve the communities.
- Policy 3: Prevent the establishment of regional commercial facilities.
- Policy 5: Allow the continuation of home businesses in the area.

As data from the 2000 Census indicate, most workers in Chalfant commute to jobs outside Chalfant, primarily in Bishop and Mammoth Lakes. It is anticipated that this commuting trend will continue. Anecdotal data from recently developed single-family residential subdivisions elsewhere in Chalfant has shown new homebuyers in the area to be working people who are currently residents of the Eastern Sierra.

As a result of the lack of employment in the Chalfant area and the demand for mid-range housing for working people in Mono and Inyo counties, it is anticipated that the housing in the proposed development will be occupied by local residents as their primary residence and will not be used as second homes or seasonal use residences. It is also anticipated that the housing will be occupied by working people who are currently residents of the Eastern Sierra.

The proposed development will create jobs during the initial construction phases of the development. It is anticipated that short-term construction-related jobs will be absorbed by existing employees from Mono County and Bishop and that the construction phases of the development will not increase the local population by increasing long-term employment opportunities. Similarly, the development will not create additional demand for housing as a result of increasing long-term employment opportunities since construction jobs will be taken by existing residents of the area.

Residential development may also create a limited demand for support services for the development such as home repairs, landscape services, cleaning services, etc.. Residents of the development will also create a demand for goods and services such as household goods, clothing, recreation, transportation needs, utility needs, etc.. It is likely that most of the demand for goods and services will be met by existing businesses and employees, primarily in Bishop, and that the project will not create the need for additional employees or housing for those employees.

CUMULATIVE IMPACTS

Cumulative impact analysis must discuss the cumulative impacts of a project when the project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (CEQA Guidelines Section 15065 (a)(3).

Cumulative impact analysis in an EIR must consider "reasonably foreseeable" projects in the general vicinity. Reasonably foreseeable projects in the Chalfant Valley in the general vicinity of the White Mountain Estates Specific Plan include:

- The Ranches at Osage Circle: A 15-lot subdivision located approximately 2 miles northwest of the project site on Chalfant Road. The lots are one acre in size with individual septic systems and an on-site community water system.
- Wofford: A 17-lot subdivision located approximately 3.5 miles north of the project site.
- Mountain Vistas Specific Plan: A 39 lot subdivision with a 1.52 acre commercial lot located approximately 2 miles north of the project site. The lots have a gross density of 0.5 acres with individual septic systems and an on-site community water system.

Land Use Cumulative Impacts. All of the projects are in areas planned for future residential and commercial development in the Mono County General Plan. No land designated for other uses is proposed for development; cumulatively considerable land use impacts are not anticipated.

Population, Housing, and Employment Cumulative Impacts. All of the proposed development is residential development, with some limited commercial development, which will add housing to the area and increase the population. The residential development is anticipated to increase the demand for goods and services, which will be met by existing businesses and residents in Mono County and Bishop. Residential development in the Chalfant Valley is not anticipated to create cumulatively considerable impacts to population, housing, or employment.

Public Services Cumulative Impacts. The White Mountain Estates Specific Plan with the three other foreseeable projects in the area could increase the Chalfant area population by an estimated 295 residents. This will require additional general governmental services, law enforcement services, fire protection services, emergency medical services, recreational facilities, and schools. This impact is cumulatively considerable and potentially significant. Mitigation measures in the White Mountain Estates Specific Plan reduce impacts to public services to less than significant levels.

Geology and Soils Cumulative Impacts. Although continued development in a geologically active region may have long-term adverse environmental effects, projects must meet seismic design standards in all new construction so geologic impacts are not considered cumulatively considerable. In the sparsely vegetated Tri-Valley soil erosion from development may be cumulatively considerable and potentially significant without mitigation. Mitigation measures are expected to reduce potential soil erosion impacts to less than significant levels.

Vegetation and Wildlife Cumulative Impacts. The Chalfant Valley has a limited amount of private land surrounded by large amounts of public lands. Sensitive wildlife species occur outside of developed community areas. Projects are designed to avoid impacts to identified sensitive wildlife species and identified habitat areas. Development of the White Mountain Estates Specific Plan and the three reasonably foreseeable projects in the area is not anticipated to create cumulatively significant impacts to wildlife. Vegetation in the area is predominantly sagebrush and desert scrub, common and widespread vegetation types throughout the Eastern Sierra and the Great Basin. Development is not anticipated to create cumulative considerable impacts to vegetation. The proposed project has been designed to avoid impacts to identified sensitive plant species and habitats.

Visual Resource Cumulative Impacts. The development of the White Mountain Estates Specific Plan, by itself, will not have significant visual resource impacts since it is adjacent to existing development and mitigation measures for the project will reduce potential visual impacts to the lowest feasible level. However, the Tri-Valley area, including Chalfant, is extremely open, with long sight lines and sparse low-lying vegetation. Additional development throughout the area will change the visual impression from undeveloped open areas to developed areas and incrementally, over time, will have a cumulatively considerable impact on visual resources in the area. Development of the White Mountain Estates Specific Plan and the three reasonably foreseeable projects will result in cumulative visual impacts. Mitigation measures for all development projects in the area will reduce visual impacts to the lowest feasible levels.

Cultural Resource Cumulative Impacts. Cultural resources have been surveyed for the White Mountain Estates Specific Plan and other projects in the area. The potential for cumulative cultural resource impacts is considered low; mitigation measures can reduce cumulative impacts to less than significant levels.

Circulation Cumulative Impacts. Cumulative increases in traffic will occur with the White Mountain Estates Specific Plan and the three other projects. Highway 6 has the capacity to handle those traffic increases. Access improvements to Highway 6 related to each project, and developed in the Chalfant Valley Community Corridor Plan being developed by Caltrans, Mono County, and the Mono County Local Transportation Commission, will occur as the projects are developed. Circulation impacts will not be cumulatively significant.

Noise Cumulative Impacts. There are no sensitive noise receptors in the Chalfant area other than residential development. Two of the projects are located over one mile away from the developed community area in Chalfant. The remaining two projects are located on the west side of Highway 6, in what is a primarily undeveloped area of Chalfant. Increased traffic noise from the projects will be the only significant noise impact. It will not be cumulatively considerable since the projects are not located adjacent to each other and most of the housing in Chalfant is located away from Highway 6, the main transportation corridor in the area.

Air Quality Cumulative Impacts. Although cumulative fugitive dust and other construction emissions could contribute to regional PM₁₀ degradation, those emissions are regulated by the Great Basin Unified Air Pollution Control District. Project conditions and mitigation measures for the identified residential development include a number of measures to reduce fugitive dust and emissions. Requiring EPA Phase II woodburning appliances will also reduce cumulative effects. There should be no significant cumulative or regional PM₁₀ degradation.

Water Resources Cumulative Impacts. The proposed project will not contribute to cumulative impacts to water resources in the vicinity. The hydrogeologic analysis for the project indicated that there is sufficient recharge in the project vicinity to maintain the longterm sustainability of the resource with the additional use estimated for the proposed project.

Energy and Resource Conservation Cumulative Impacts. Taken together, the projects are small-scale energy users. Energy supplies are expected to be plentiful well into the future and energy conservation measures are routinely required in new construction. No significant cumulative impacts are expected.

VI. MITIGATION MONITORING PROGRAM

Mitigation measures proposed for the White Mountain Estates Specific Plan have been incorporated into the policies and standards for the Specific Plan. The Compliance Checklist for the White Mountain Estates Specific Plan will incorporate mitigation measures approved for the DEIR.

Over the life of the project, the Community Development Department (Planning, Building, Code Compliance) will utilize the Compliance Checklist for the White Mountain Estates Specific Plan to ensure that all Specific Plan and DEIR requirements, including approved mitigation measures, are met at the appropriate phase of the development. *The Compliance Checklist on the following page is currently a sample only.* Following adoption of the Specific Plan, the final checklist will be completed and will integrate all development requirements from the White Mountain Estates Specific Plan including the Specific Plan policies, standards, and diagrams, the mitigation measures proposed in the EIR, and conditions of approval for the tract map.

The final checklist will be maintained as a separate file for the project and will be consulted throughout the life of the project to ensure that development occurs in compliance with the provisions of the Specific Plan and the DEIR.

Compliance Checklist: White Mountain Estates Specific Plan

(A copy of pertinent permits or approvals should be attached to this checklist.)

(This checklist addresses compliance for the White Mountain Estates Specific Plan, including Specific Plan policies and standards, Tract Map conditions of approval, and mitigation measures from the EIR).

Project Benchmark: Prior to Approval of Final Tract Map

Approvals/Permits/Mitigation Required	Monitoring Dept	Contact for Compliance	Date Completed	Staff Initials	Notes
1. Will serve letter from Chalfant FPD	CDD	WME LLC			
2. Well permit	CDD	WME LLC			
3. Septic system permit	CDD	WME LLC			
4. Encroachment permit from Caltrans	CDD	WME LLC			
5. Encroachment permit from Mono County	CDD	WME LLC			
6. Grading permit	CDD	WME LLC			
7. SWWPP	CDD	WME LLC			
8. Permit from GBUAPCD, if necessary	CDD	WME LLC			

VII. REFERENCES

References Consulted

AMEC Earth and Environmental, Inc.

Review of "Preliminary Hydrogeologic Investigation White Mountain Estates – Phase 2, Chalfant Valley, Mono County". 2005.

Review of Water Resource Documents: White Mountain Estates, Mono County, Prepared by Golden State Environmental. 2006.

Review of Sierra Geotechnical Service's Third Response to Peer Review and Additional Geologic Information. Phase 1 and Phase 2 of Tentative Tract May 37-46. White Mountain Estates Subdivision, Chalfant Valley, Mono County, California. April, 2007.

Bureau of Land Management.

Resource Management Plan for the Bishop Resource Area. 1991.

Burton, Jeffery

An Archaeological Survey of the Proposed White Mountain Estates Subdivision II, Chalfant Valley, Mono County, California. Contributions to Trans-Sierran Archaeology No. 53. 2004.

California Department of Transportation. District 9.

District 9 Planning Documents--Route Concept Reports, Route Development Plans, and District System Management Plans.

California Governor's Office of Planning and Research

The Planner's Guide to Specific Plans.

California Regional Water Quality Control Board. **Water Quality Control Plan for the Lahontan Region (Basin Plan). 1995.**

Eastern Sierra Engineering

Drainage Report for White Mtn. Estates, Mono County, California. 2005.

Ehlert, Keith W

Fault and Seismic Investigation for Proposed Residential Development, Tract 37-16, Mono County, California. 1999.

Response to Review Letter Prepared by URS Grenier Woodward Clyde for Mono County, California. 2000.

Response to Review Letter Prepared by Geopentech for Mono County, California. 2002.

Federal Emergency Management Agency (FEMA)

Flood Insurance Study (FIS) , Mono County, California, Unincorporated Areas. 1997.

Geopentech

Review of Keith W. Ehler's Report Titles "Fault and Seismic Investigation for Proposed Residential Development, Tract 37-16, Mono County, California", dated August 27, 1999. 2000.

Golden State Environmental

Preliminary Hydrogeologic Investigation, White Mountains Estates—Phase 2, Chalfant Valley, Mono County, California. 2005.

Addendum to Preliminary Hydrogeologic Investigation, White Mountain Estates—Phase 2, Chalfant Valley, Mono County, California. 2005.

Preliminary Hydrogeologic Investigation, 72-Hour Pumping and Recovery Test, White Mountain Estates—Phase 2, Chalfant Valley, Mono County, California. 2006.

Water Availability, White Mountain Estates—Phase 2, Chalfant Valley, Mono County, California. 2006.

Great Basin Unified Air Pollution Control District.

Mono County Ozone Attainment Plan. 1991.

Regulation XII. Conformity to State Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act. 1994.

Regulation XIII. Conformity of General Federal Actions to State Implementation Plans. 1994.

JBR Environmental Consultants, Inc.

Wildlife Surveys, White Mountain Estates Parcels, Mono County, California. 2004.

L.K. Johnston and Associates

June Lake Highlands Final Specific Plan/Environmental Report. 2001.

LSA Associates, Inc.

Traffic/Circulation Analysis: White Mountain Estates/White Mountain Estates Projects, Mono County. 2004.

MHA Environmental Consulting Inc. et.al.

TASK 1: REPORT Preliminary Data Collection and Hydrologic Models for the US Filter Tri-Valley Surplus Groundwater Program Mono County, California. 2001.

Mono County Community Development Department

Building/Planning Guide: Buying and Developing Property in Mono County. 2003.

Mono County Code

Mono County Land Development Regulations (Revised Land Use Element). 2001.

Mono County Local Agency Formation Commission (LAFCO)

Chalfant Fire Protection District Sphere of Influence Report.

Mono County Local Transportation Commission (LTC)

Mono County Regional Transportation Plan (RTP). 2005.

Mono County Office of Emergency Services

Mono County Emergency Operations Plan (EOP). 2004.

Mono County Planning Department

Mono County Environmental Handbook. 2003.

Mono County General Plan. 1993.

Mono County General Plan, Revised Land Use Element and Land Development Regulations. 2001.

Mono County Housing Element. 2004.

Mono County Master Environmental Assessment. 2001.

Mono County Trails Plan. 1994.

Multi-Jurisdictional Local Hazard Mitigation Plan for Mono County and Mammoth Lakes. Draft 2005.

Mono County Department of Public Works

Letter from Kelly Garcia, Assistant Director, to Eastern Sierra Engineering, May 2, 2005, regarding the Drainage Report for White Mountain Estates, Tentative Map 37-46.

Mono County Department of Public Works and SRK Consulting Engineers and Scientists

Report of Disposal Site Information. Joint Technical Document. Benton Crossing Landfill. SWIS # 26-AA-004. WDID # 6B260300002. 2004.

Mono County Sheriff's Log, Flood of 1989 in Tri-Valley, 8/9/89.

Paulus, James

Botanical Report for the Proposed White Mountain Estates Housing Site. 2004.

Sierra Geotechnical Services Inc.

Earthquake Fault Zone Hazard Evaluation. Phase 2 of Tentative Tract Map 37-46, White Mountain Estates Subdivision, Chalfant Valley, Mono County, California. March, 2005.

Addendum Report. Results of Additional Subsurface Fault Investigation. October, 2005.

The Housing Collaborative LLC et.al.

Eastern Sierra Housing Needs Assessment. Draft 2004.

URS Grenier Woodward Clyde

Review of Keith W. Ehlert's Report Titles "Fault and Seismic Investigation for Proposed Residential Development, Tract 37-16, Mono County, California", dated August 27, 1999. 2000.

US Census Bureau

1990 Census, Summary Tape Files 1, 3.

2000 Census, Summary Files 1, 3, 4.

Vector Engineering.

Preliminary Closure and Postclosure Maintenance Plan for the Chalfant Valley Landfill. 1998.

Report of Disposal Site Information for the Chalfant Valley Landfill. 1995.

Persons Consulted

Bishop Joint Union High School District
Bishop Union Elementary School District
Mark Geyer, Superintendent

Chalfant Valley Fire Protection District
Steve Reish, Assistant Fire Chief/ Acting Fire Chief

Eastern Sierra Propane
Cameron Riley

Eastern Sierra Unified School District
Joel Hampton, Superintendent

Inyo County Planning Department
Jan Larsen, Senior Planner

Mono County Community Development Department
Scott Burns, Community Development Director
Larry Johnston, Principal Planner
Gerry LeFrancois, Senior Planner

Mono County Environmental Health
Dennis Lampson, Director

Mono County Public Department of Public Works
Kelly Garcia, Assistant Director
Evan Nikirk, Director

Southern California Edison
DeAnn Toth

INTERNET REFERENCE SITES

The current internet address at the time of printing is listed for these sources; the address may have changed since printing.

California Air Resources Board (ARB)
Emissions and air quality data. Nonattainment status.
www.arb.ca.gov

California Department of Transportation (Caltrans)
Annual Average Daily Traffic (AADT) counts, Annual Average Daily Truck Traffic on the California Highway System, Eastern Sierra Bicycle Guide, other Caltrans transportation planning documents
www.dot.ca.gov

California Geological Survey (CGS)

Information on seismic hazards, landslide hazards, loss estimates for seismic events.

www.consrv.ca.gov/CGS

Inyo-Mono Transit

Information on local transit services in Mono County.

www.countyofinyo.org.transit

National Climatic Data Center (NCDC)/National Oceanic and Atmospheric Administration (NOAA)

Climate data.

www.ncdc.noaa.gov

U.S. Environmental Protection Agency (EPA)

Emissions and air quality data. Nonattainment status.

www.epa.gov/air

US Geological Survey (USGS)

Information on seismic hazards, volcanic hazards, landslide hazards, and water hazards.

www.usgs.gov